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INTERNATIONAL MEDICINE AND THE MEDICAL PROFESSION *

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The changes which are occurring so rapidly in the political and social nature of the world, should be examined with reference to their impact on the duties of the medical profession. I feel that to exert greater influence on present international trends in the interests of society as a whole is a responsibility which can be met by medical men and women everywhere, who are united in their professional associations.

The title of this paper is perhaps confusing in suggesting that international medicine is something apart from medical practice in individual countries. This is not my intention, since we all recognize that medicine has always been international. Its art and science have been the gift to humanity of men of all races and creeds. This cosmopolitanism is growing rapidly, as evidenced, for instance, by the increasing number of good scientific papers from many new countries to be found in leading journals. This is but one facet of the awakening of the peoples of Africa, Asia, and the other continents, to the power of science in removing poverty and ill-health and giving them material possessions. It is technology and its attendant assets which are most desired, frequently to the neglect of other essentials of the good society. This partiality of populations burdened by economic and social handicaps is quite understandable, but they need guidance in putting their plans in perspective. Much can be done by the liberal professions in each country to help in this.

Though our scientific and medical heritage has come to us from many earlier civilizations of Asia, Europe, and North Africa, there are two historic phases of supreme importance to recall today. We owe Ancient Greece more than Hippocratic medicine and the beginnings of scientific enquiry. In the present context it is equally important to remember that from the Hellenic culture emerged the philosophy of the independent spirit of man and the democratic principle of government. The Greeks did not make a cult of knowledge nor did they seclude their philosophers and wise men. They treated life and society as a whole, and so it should be today.

Then there is the European renaissance. Because our own technological and scientific achievements flow directly from the geniuses of the sixteenth and seventeenth centuries, we should not forget that these men had to overcome bigotry and prejudice to proclaim scientific truth. Elsewhere I have said: 'International policies and programmes can aim at some of the features apparently significant in Ancient Greece and renascent Europe. In that medicine has a special responsibility inherent in its humanitarianism and its science, it must be concerned with those general philosophical and social movements which lead to genius being discovered and freed'.[1]

INTERNATIONAL MEDICINE TODAY

Even acknowledging that science and medicine have always been international, the rush of events in this century, particularly since the last World War, is creating a movement which can properly be called 'international medicine'. It is a movement which is accelerating and which I believe may sweep most medical professions along too quickly and irresistibly for them to be conscious of the consequences. Let us, therefore, examine this international medicine in some detail. For this purpose I divide it into two broad groups: (*a*) *Inter*-governmental medicine, and (*b*) *non*-governmental medicine.

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A. Inter-governmental medicine

Inter-governmental medicine is today represented by one universal body, the World Health Organization, which is a member, as a specialized agency, of the United Nations Organization. Without getting lost in unnecessary history, certain features of the evolution of this inter-governmental agency are worth examining, since they emphasize the opportunities for medicine as a profession, distinct from official health services, to be helpful in the cause of world health.

Collaboration of governments in health matters commenced in the nineteenth century in Europe. Two reasons impelled this move in spite of the reluctance of a hundred years ago to tolerate official operations or accept negotiation outside conventional diplomatic exchanges through foreign offices.[2] Firstly, cholera spreading along trade routes through the Middle East, alarmed the whole of Western Europe. Secondly, there was the reaction of most countries to drastic stoppage of ships, destruction of goods, and quarantining of passengers and crews, associated with flagrant corruption and inefficiency — all in the name of preventing the spread of disease.

These two factors overcame traditional unwillingness so that several European and other countries cooperated in a succession of international sanitary conventions which early in the present century led to the first limited international organizations in Washington, Paris and Alexandria. We should note that it was not fear of disease alone, but the additional disturbance of international traffic by alleged preventive measures, that prompted this first essay in inter-governmental cooperation in medical matters. The involvement of medicine in national and international social and economic matters and, conversely, the impact of these factors on medicine, now form the basis of existing cooperation. Too frequently the medical implications of this cooperation are deliberately or by default determined by official health services only. Yet there is an essential need for non-governmental medicine to be a partner in many phases of this interaction of medicine and society.

The inevitability of the world conquering distance and hence increasing the interdependence of countries, was characteristically foreseen by Field Marshal Smuts in his preparatory work for the League of Nations. In his famous pamphlet, *The League of Nations: A Practical Suggestion*, he argued that 'the League should be thought of not only as a possible means of preventing future wars, but much more as a great organ of the ordinary peaceful life of civilization . . . '.[3] This concept has led to the vast complex of inter-governmental activity in so-called 'functional' fields — communications, agriculture, meteorology, health, education, etc. — as distinct from political negotiation. The chief expression of this concept has become inter-governmental technical aid — one of the great catalysts of history. It is a force, whatever its political overtones, which inexorably alters the destiny of all. It is not a matter of simply granting economic and technical aid. Indeed, many believe that in its present form, especially operated officially, it is untested and may even be doing harm as well as good to both donors and recipients. As educated men and women and as members of an influential profession, doctors should be amongst the first to accept this phenomenon.

Technical aid in medicine, agriculture, and the other subjects, to less favoured communities has never been a monopoly of governments. Indeed, as I shall show presently, it has previously been an activity chiefly of non-governmental groups. The essential feature to note here is that technical aid today

is overwhelmingly inter-*governmental* and its massive resources of men and money are a dominant political and social world force. It may be divided conveniently into two forms: multilateral and bilateral — to use the jargon of today.

1. *Multilateral Programmes*

This means inter-governmental technical aid undertaken widely through the joint action of several governments. Supreme amongst such organizations is the United Nations system with its large number of specialized agencies — United Nations Technical Assistance Administration; Atomic Energy Agency, WHO, UNESCO, FAO, ILO, and many others. But there are other useful groups to be found in the Colombo Plan of the Commonwealth: the Pan-American Union, those sponsored by the Communist states, and a number of regional bodies such as CCTA in Africa, and the South Pacific Commission.

The United Nations system is too important now to be ignored. Too frequently irritation with certain of its political declarations or with the actions of its more irresponsible members diverts attention from the astonishing growth of useful inter-governmental economic and technical systems. It is true that there are weaknesses in the United Nations system. If either of the two leading powers, the United States of America or the USSR, should withdraw support, a severe dislocation or even collapse is possible. In addition, the tendency of many states to exercise a 'bloc' voting pressure, not always objectively, may be harmful. Hence the system has ingredients of instability and cannot usually rise to higher standards of negotiation, conduct, or practice than those of its separate heterogeneous member-states. However, in its economic and technical programmes, at least it is a universal system now quite essential, already influential, and potentially the most effective force for world social change ever known.

Though the United Nations programmes of technical aid in raising living standards have been most dramatized, it is wrong to underestimate their usefulness to pure science. Scientists, including medical scientists, are increasingly dependent upon the United Nations specialized agencies for a wide range of functions — publications, exchanges of people and data, training programmes, joint studies and conferences, systems of nomenclatures and standards, research, and technical cooperation and coordination in many other fields. The World Health Organization is the United Nations agency of primary interest to medical men and women, but it is not the only one concerned with medicine. The United Nations Children's Fund, the Atomic Energy Agency, the Food and Agriculture Organization — especially in its nutritional work, the International Labour Office, and UNESCO have programmes with health and medical elements. The medical professions of the world are fortunately participating directly in and, conversely, are being considerably affected by these activities. For my present purpose only two of many factors are selected for comment.

Firstly, the number of medical and related scientists and practitioners is being increased throughout the world. In each country a medical profession is being formed, mostly by training conducted in its own new or improved medical schools, but partly in foreign institutions. Here it is relevant to remark that new countries are clamant in their requests for their own medical and nursing training schools. There are over 600 medical schools scattered through the continents' with new ones, assisted by the United Nations, starting in Africa, Asia, and Latin America. Allied to this local training of doctors is the extended system of international fellowships. WHO alone is granting over 1,000 fellowships annually to its member states in every medical and health subject for postgraduate study in foreign countries. Thus higher standards and a wider practice of scientific medicine are being fostered on a world-wide scale through the United Nations system.

The growth and dispersal of medical training and practice in this way, alongside general social and economic advances, are improving world health. But also, even in the most backward communities, however timidly, educated and professional groups are appearing. Here is a fact to be noted by the older medical associations concerned with international development in their professional fields, to which reference is again made below.

The second facet of the medical programmes of WHO and its sister organizations is the part played by doctors and scientists as individuals. The founders of WHO hoped that its so-called regular or 'permanent' staff, and hence its organizational structure, would be kept to a minimum. They did so in the belief that this would give the best medical service to countries and would avoid something of bureaucracy and the hazards of administration. A corollary to this basic principle was the intention to use *temporary* technical staff drawn from countries anywhere to undertake many of the general technical services and the individual local health projects.

'Specially recruited staff enables WHO to seek the best available adviser for each particular local problem, to adjust technical staff continuously to the needs of the moment, to avoid staff redundancy when programmes end, and to guard against an international organization depriving national services permanently of their own essential staff'.[5] Though these original principles are perhaps no longer equally emphasized, they concern the medical profession directly. They mean that individual medical men, even though not members of official medical or health services, are able to take an active part as temporary consultants, advisers, etc. in world health programmes. This is clearly of much technical and even philosophical advantage to all countries either 'giving' or 'receiving' — an advantage which could not be fully gained through an international official service using only its own regular staff or people recruited only from national official services.

'It is a flexible, living system in which the majority of the leading medical practitioners and institutions of the world are the essential components. These are the store-houses of modern medical knowledge. Thus their talents, traditions, experience and ingenuity are serving not only their own communities, but all mankind'.[6]

2. *Bilateral Programmes*

Medicine has a place, too, in many of the bilateral programmes. The United States of America has been the strongest advocate of arrangements of this nature. She has agreements with large numbers of countries in many regions to give technical and economic assistance. The United Kingdom has followed suit, though her colonial system includes perhaps the oldest and most comprehensive technical assistance programme to date. Recently (and disconcertingly in the context of this study) the USSR and Communist China have launched similar schemes. These bilateral arrangements are also inter-*governmental* and applied on an enormous scale. Their importance to the world medical profession is therefore obvious. It is the growing eagerness of the Communist states, however, to extend their bilateral technical aid to Asia, Africa, and even Latin America, which particularly poses questions, especially for those anxious about the tendency of medical services towards socialized forms in the newer countries .

As the principal possessor of technical resources, South Africa could perhaps have sponsored bilateral programmes in Africa for the new communities eager for guidance and assistance. Her participation in CCTA but strengthens the argument. These potentialities of bilateral technical aid in Africa, including medical exchanges, are presently being developed by the United States of America, the United Kingdom, France, Israel, and the Communist states. South Africa's opportunity seems regrettably to be passing.

B. Non-governmental medicine

1. *Missionary Medicine*

As I have pointed out before, the essential international character of medicine throughout the course of history followed the travel across frontiers of individual medical men and their extensive personal foreign correspondence. The expansion of the Western world during the last century led to medicine, like other technical and social movements, having to seek wider service through organization. Medicine has conveyed its message and help in recent decades to the new continents partly through official colonia' services but, even more extensively, in Asia and Africa, through missionary

societies. In also rendering religious services these pioneer missionaries did more than heal the sick by scientific treatment. They provided an example of the practice of personal medicine. Missionary medicine was also important in another sense. It set up schools of medicine usually related to secular education based on Western culture. New countries, therefore, in adopting the medicine offered by the missionaries, also received something of the social and ethical principles on which it was based.

Today missionary medicine is declining, especially relative to that offered by WHO and the other official international agencies. However much some may dislike its proselytizing purpose or disapprove of its occasional technical and administrative deficiencies, missionary medicine should be credited for its human and social contributions. It has demonstrated a type of medicine valuable to peoples adopting the disturbing ways of modern civilization. In this sense there can be but regret that such a wholesome agent for helping new countries should now be in eclipse in many lands.

2. *Medical Foundations*

Foundations have been fashionable since the early days of this century in the United States and later in several European countries. Medical research has been the popular objective. The greatest of these has been the Rockefeller Foundation. It was fortunate for international medicine that the ideas of Mr. Rockefeller and his associate Mr. Gates were framed by the United States Congress in granting a charter to the Foundation in the noble phrase: 'To promote the well-being of mankind throughout the world'.[7] Indeed, its experience of international health programmes, especially of technical missions and fellowships, has determined the nature of much inter-governmental medicine, firstly, in the League of Nations and now in the World Health Organization. Many countries in Asia, Africa, and Latin America, too, owe their medical progress to this Foundation. Many other foundations have followed in undertaking international health programmes, notably the Carnegie and Milbank Foundations of the USA and the Nuffield Foundation of Great Britain.

The all-embracing charter of the World Health Organization at first threatened to divert many of these foundations away from international medicine. It is reassuring for the good of non-governmental medicine that without embarrassment to inter-governmental medicine, indeed to its enrichment, there now seems a willingness for them to continue.

Foundations have undertaken a wide variety of programmes in international medicine, for which their objectivity and elasticity suited them — fellowships, technical missions, research, local studies, and enquiries. The recent survey of the tropical African medical position by the Rockefeller Foundation in cooperation with the United Kingdom, and the remarkable proposals by a Nuffield Committee for a Central African medical school at Salisbury, are typical of the special usefulness of Foundations.

It should be clear, therefore, that foundations deserve the support of the medical profession. They are vigorous exponents of non-governmental medicine, but work on behalf of and through governments and in harmony with inter-governmental agencies. They extend medicine scientifically by their encouragement of research, and geographically by helping new countries to introduce modern health. They are independent and willing to pioneer and experiment, and represent one of the few means open to countries for obtaining assistance not hindered or coloured by official considerations. Foundations, like many other non-governmental institutions, frequently possess a comprehensive charter and have administrative freedom to alter policies and structures easily and expeditiously in tune with events. Thus piecemeal medical programmes, isolated from essential parallel or antecedent developments in other subjects, can be avoided. Contrariwise, inter-governmental programmes in medicine can rarely, if ever, include adequate components in social and humanistic fields, fundamental though these are for the growth of good medicine in a balanced society. The laborious work by the United Nations in the name of coordination and cooperation is frequently but a poor substitute. Utilitarianism, too, is unavoidably a prime determinant of policies of political organizations such as those of the United Nations. Furthermore, they suffer from organizational and administrative rigidity and limitation.

The following extract concisely portrays the argument favouring certain general advantages of a good (there can be bad) private body over an inter-governmental agency: 'Indeed, at one point after 1920, Rose hoped that the League's Health Organization, if adequately financed by its constituent members, could take over all the work which the International Health Division was carrying on. Very reluctantly he came to the conclusion that this hope could not be realized, at least in his lifetime. There were three principal obstacles. The Health Organization was not adequately financed, and in the growing economic crises of the twenties and early thirties its budget was necessarily reduced below a level that could effectively maintain its broadening work.* In the second place, because it was a government organization, subject to the red-tape procedures, which seem to be an inseparable adjunct of public operations, it could not act with the speed and decisiveness which the nature of its work often demanded. Thirdly, in spite of its able leadership, it was frequently and inescapably thwarted by political considerations such as a private agency does not have to face'.[8]

3. *Universities*

A third but more limited non-governmental task in international medicine has been undertaken by some American and British Universities. Few though the examples are they are rich in giving the full assistance which promises to help society as a whole and to make doctors something more than technicians. Johns Hopkins and Manila Universities; London and Nigerian Universities; Birmingham and the Federation Universities; and others are cementing bonds which will mean better medicine, finer universities and richer international relationships. It is sad that South Africa missed opportunities in this. The Universities of Cape Town and the Witwatersrand, if times had been less uncompromising, could have had these so-called 'bridges' with the young universities of Africa.

The value of this type of international medicine is similar to that given for the non-governmental groups already listed. It is a medicine which is independent; it is non-official; it is related to liberal educational and cultural movements; and it represents one of the finest facets of professional endeavour — academic medicine.

4. *Industrial Medicine*

No mean debt is owed to the large industrial corporations which carry on their operations widely in the world. The medical services of the oil, mineral, transport, pharmaceutical, and other large international concerns of many different origins — American, British, French, Dutch, etc. — have given much more than mere service to their own employees. There are many instances of their medical men and institutions stimulating local development by research, training, and direct assistance. The medical staffs of such services are amongst the most vigorous and versatile in the practice of international medicine.

5. *Medical Associations*

In this selected list of non-governmental international health groups the last, but the most significant (as the champions of the best in non-official medicine) are, naturally, the voluntary associations. In this field the World Medical Association is the undoubted leader in the true professional sense, because it is attempting the magnificent task of consolidating the doctors of the world in one universal professional body.

(*a*) *The World Medical Association* is stimulating the establishment of vigorous national medical associations in various countries and through full representation of these associations is attempting to make the World Medical Association a world force. This goal is being achieved, since nearly all European countries (except Communist states) — the United States of America, the British Commonwealth, and several countries in Asia and Latin America — have now good medical associations. Its earlier limited representation and somewhat introspective concept of its functions are now improving.

* This is not applicable today, since the general work of WHO is generously, and indeed in certain respects perhaps uncritically, financed.

Support is coming from each continent and plans are forming for imaginative international medical programmes. Thus the following constitutional objectives are being sought:

(i) To promote closer ties among the national medical organizations and among the doctors of the world.

(ii) To maintain the honour and protect the interests of the medical profession.

(iii) To study and report on the professional problems which confront the medical profession in the different countries.

(iv) To organize an exchange of information on matters of interest to the medical profession.

(v) To establish relations with, and to present the views of, the medical profession to the World Health Organization, UNESCO, and other appropriate bodies.

(vi) To assist all peoples of the world to attain the highest possible level of health.

(vii) To promote world peace.

Noble though its aspirations are, the World Medical Association is poor in resources and activities when compared with the gigantic inter-governmental (official) bodies such as the World Health Organization and UNESCO. The WMA holds an annual Assembly, but this is attended only with great difficulty by many delegates, since they are usually busy independent medical practitioners. It has but a small executive in its New York office. Representative though it is of many national medical associations, it has little power as yet to exercise any sustained influence in world health developments. Yet, as I shall point out presently, the World Medical Association is the best and nearly the only channel for doctors of the world as a corporate profession to have any worthwhile impact on world medicine.

(*b*) *Specialist associations* are now legion. Some are permanent and well organized, while others meet only occasionally. So doctors are becoming world travellers and leaders in 'getting together'. Every medical and surgical speciality has its world and regional conferences and many publish international journals. By these means the medical profession of all countries is not only advancing its technical knowledge — usually the prime objective of most of these specialist associations, conferences, organizations, and unions — but also automatically becoming interested in international medical affairs. Travel and personal contact are as powerful in medical circles as any in widening horizons and enlarging comradeship of all races. So in the sense of the present theme this is a most satisfactory contribution to international medicine.

It is noteworthy too that the leading international organizations of this kind are recognized by the United Nations bodies — WHO and others — and offered certain privileges. This acceptance of *non*-governmental organizations in certain limited ways in *inter*-governmental arrangements is not new, as the classical examples of the International Red Cross and the League of Red Cross Societies prove.

In international health the principle of such cooperation has been followed by such organizations as the Pan American Sanitary Bureau and others. Now, by the privilege of admission to official relationship, a non-governmental organization may attend WHO meetings and submit memoranda. The medical profession has here an attractive, if restricted, approach to the inner councils of inter-governmental health. It has not been vigorously used as yet, partly because it is untried and unappreciated. This matter will be examined below.

THE SIGNIFICANCE OF INTERNATIONAL MEDICINE FOR THE MEDICAL PROFESSION

The review given above reveals the vast scale and complexity of modern organized international medicine. It makes clear that in its *inter-governmental* form of WHO and its sister agencies it has become universal and with a vested power of its own. Furthermore, it is a force already exerting dramatic effects. The temptation is therefore to enlarge on any one or all of the following relevant world topics:

(i) Medical services appearing and growing rapidly.

(ii) Doctors and nurses and their associates being trained in increasing numbers.

(iii) Disease being treated, controlled, and prevented.

(iv) Health and social conditions being improved.

(v) Human populations growing rapidly, even alarmingly.

(vi) Medical knowledge being increased and widely communicated.

However, in keeping with the title of this paper it is particularly the problems posed for the medical profession by the recent phenomenal growth of *organized* international medicine as such which provoke thought. Deep political and social forces are moving the peoples of the world irresistibly into closer-knit organization. An impatient nationalism, on the one hand, and the inter-governmental preponderance of economic and technical assistance, on the other, are inducing the growth of governmental or official social and technical services — frequently at the expense of non-official services. This accelerating trend is given further world impetus by two additional facts: Firstly, the Communist states do not have non-governmental institutions. They do not even recognize or understand the concept. Secondly, many newly-emerging countries owe their sovereignty to a form of nationalism which is obsessive and exclusive. It is generally unsympathetic, at least at present, to 'outside' and non-governmental movements such as voluntary or independent social groups and professions. The socialistic tendency of many such states naturally further favours official programmes in most fields.

The present situation therefore means that the voluntary or independent body playing a part directly in national life is, or will be, insignificant for many peoples. Conversely, services arranged on a national basis, or financed and sponsored nationally, in a great part of the world will become official or be dominated by centrally and officially operated agencies. It is a situation determined partly by the inter-governmental (official) character and partly by the massive power of the money and prestige of the United Nations and other major inter-governmental programmes. The recognition given by these agencies to non-governmental organizations is commendable, but is not at present an effective means to further the voluntary or non-official movement in new countries.

Many will argue that modern political, economic, and technological phenomena make this trend desirable as well as inevitable. Changes in communities which are advancing socially are too fundamental, it is claimed, for any national function to be delegated to non-governmental agencies. Nevertheless the formidable growth of centrally and officially controlled organization makes many people anxious. Accepting the complexities of organization needed to foster modern economic and technological progress, these critics deny the inevitability of the exclusion of the non-governmental organizations, or the neglect of what they believe are fundamental human and philosophical needs.

The following quotation from Elspeth Huxley refers to earlier British colonies in Africa, but also has its application in the world which is being transformed by the twin forces (already mentioned) of impetuous nationalism and precipitate economic and technological inter-governmental programmes:

'It sometimes appears that our modern colonies are forcing-houses where, under conditions of great heat and sultriness, we cultivated transplanted seedlings in soil deficient in certain ingredients needed for the healthy growth of those particular exotics. We force an omnipotent bureaucracy without honesty, a democracy without enlightenment, an economy without toil, a nation without unity, a culture without art: in short, a society without a faith to give it purpose or a code of morals to give it strength. Strange blooms may result.

'Yet in the event, things may not turn out so badly as pessimists foresee — though I am sure they will not turn out in the least as optimists expect.'[9]

Members of the medical profession face disturbing challenges. They cannot but applaud the rapid assistance being given by inter-governmental agencies to millions of people dogged by ill-health and poverty. They cannot but welcome the rich new opportunities of service and technical progress which are made possible for them by this world-wide system. Nevertheless it is their professional duty to enquire whether these advantages for international health may not still be

secured without necessarily jettisoning other qualities for the good society and the good doctor.

Firstly, a large number of new countries containing enormous populations seem destined for nationalized medical and social systems. Is this entirely necessary? Is it impossible to use international aid to foster both independent professional and non-governmental practice with the essential basic official services?

Secondly, are there not means for non-governmental medicine — the World Medical Association, foundations, universities, and other bodies — to play a more decisive rôle in the inner councils of the large inter-governmental organizations — WHO and the others? This is asked even though there exists today a system of association with non-governmental organizations.

I believe the medical profession of the world can and should exert its influence more strongly to uphold its principles. Here, in epitome, are some of the ways in which this objective may be approached:

(i) Firstly its own 'house' should be untarnished. Only those professions will be respected whose code of conduct and service is high and who deservedly are acknowledged as selfless and learned by their fellowmen. The profession of each country, therefore, cannot escape the responsibility for concerning itself with the training of medical students and young medical graduates in an ethical and professional way of life.

(ii) Secondly, the exceedingly difficult practical problem of finding professional men to give their thought, experience and time to national and international affairs needs closer attention. Busy practitioners can scarcely hope adequately to understand, let alone assist, national and international health policies and programmes in their present complexity. They do not have the time. Means must be found to release some of the leaders of the profession of each country, without sacrificing their associational standing, to work with more freedom and time in these important fields.

(iii) National medical associations should now recognize the full tide of international medicine as deeply significant to society and to themselves. It should therefore be made a subject of continuous consideration in spite of the lack of appeal of much of its legalistic and procedural characteristics. Money is needed too for the prosecution of its study by national associations.

(iv) National medical associations should urge their governments to give them a part in inter-governmental meetings concerned in policy making, even though it can be argued that the non-official medical man is active enough already in technical fields. The World Health Assembly and Executive Board are constitutionally open to non-governmental membership. The delegations and memberships of the United States and Canada to these fundamental policy-making bodies, for example, have happily and usefully included non-official doctors. In this way the American and Canadian Medical Associations, universities, and voluntary organizations have participated to some extent in inter-governmental deliberations. Their example needs following.

(v) The World Medical Association and the many technical international bodies need to assert their claims to assist the higher policy, planning, and practice of international medicine. At present, as we have seen, partly through organizational weakness and partly through denial of opportunity, there has been only a token participation of non-governmental groups in these higher functions. Governmental and non-governmental bodies are naturally in a difficult position regarding co-operation in policy-making decisions when financial and general responsibility liès with governments. Yet these legalistic and administrative difficulties should not be an insurmountable barrier to the essential and important contributions to be found in non-governmental organizations.

In present formal inter-governmental negotiation, desirable constructive proposals and criticisms of the policy, administration and budget of United Nations bodies are frequently unvoiced or weakened because of political or other non-technical factors. Responsible and respected non-governmental bodies are freer to provide some of this necessary discussion if only they could be given the opportunity. Naturally to deserve this opportunity they should study international medicine in its deeper constitutional and policy aspects — a continuous and serious responsibility.

(vi) Non-governmental bodies are particularly the guardians of the more profound cultural and ethical characteristics of the true medical profession. Though these originated in Ancient Greece and Renascent Europe they have suffered occasional obscurity. Indeed only in the last century have some of the less desirable practices of medieval medicine and surgery been cast out of the leading communities. It is the responsibility of the profession in the older countries to encourage the appearance of a genuine medical profession in the newer countries. As there is such a great body of opposition in the world today to any form of non-governmental medicine, the concept of an independent strong profession will be difficult to advocate in some regions. However, the very odds which are so strongly in favour of technological and materialistic considerations as against humanistic and cultural goals, provide an added justification for action. The formation of new and the strengthening of old professional groups is a worthy objective in all societies, especially in those lacking rich cultures of their own to balance the materialistic politics and technology so rampant nationally and internationally.

Medical groups can help more than most other groups. They are or should be tolerant in relationships, selfless in service, imaginative in duties, modest in demeanour, comprehensive in obligations, restrained in advice, and learned in profession. Dependence of their own education and experience on many arts and sciences gives them a catholicity of human sympathies and resources which should be valuable for the counsel of young striving communities. But before medical communities can presume to such privilege and position they must be sure of themselves and their idealism, and be able to rebut the charge that demands are not mere sectional arrogance and selfishness. Are the students and young medical men of the older, let alone the newer, countries practising Western medicine being adequately inculcated with the philosophy, ethics, and humanism of medicine and its culture? This is doubtful; it therefore merits the earnest examination of professional councils. This is an opportunity too for medical associations, global or local, to do something.

In this context a quotation from Fosdick[10] is warranted: 'The world has proved over and over again that men do not live by bread alone. Even if the social sciences were adequately developed and a substantial measure of national control were introduced into the complex mechanism of the twentieth century, the total result, without the contributions to cultural development which the humanities must make, would still be distorted and incomplete. There is hunger in the world which economists and political scientists cannot relieve. As they have in all ages, men turn today for their ultimate satisfaction to humanism — to the philosophers, the teachers, the historians, the artists, the poets, the novelists, the dramatists — all those who fashion ideas, concepts, and forms that give meaning and value to life and furnish the pattern of conduct'.

The 'hunger' in the world today cannot be satisfied by economic and technical aid alone. Here then is a task in which the medical profession can worthily labour in the cause of international medicine. United with similarly dedicated groups, it should be able to assist the United Nations and other inter-governmental organizations in achieving that wholeness and wholesomeness of vision and action in the service of mankind which is consummated only in the union of governmental and non-governmental, official and voluntary services.

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MOONFLOWER POISONING

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Johannesburg

Poisoning in children is quite a common cause of admission to hospital in Johannesburg.[1] Between 1953 and 1955, 4% of all admissions to the Transvaal Memorial Hospital for Children were due to poisoning.[1] Only 18 out of 527 patients, however, were poisoned by plants, 12 of the 18 cases being due to *Datura stramonium* (stinkblaar).[2]

While stinkblaar poisoning is well known, no documented case of moonflower (*Datura arborea* L and *Datura cornigera* Hook) poisoning could be found. The following case is, therefore, described because the plant concerned is an unusual one, and it appears to be the first reported instance of moonflower poisoning in South Africa.

CASE REPORT

History

At 4.30 p.m. on 26 November 1958,* a boy of 6 years 9 months of age, who had been in good health, was noticed by his mother to have a red face. During the afternoon he had been playing on the verandah near a plant known as moonflower, and many of the leaves of the plant were scattered around the verandah. He was in the habit of mashing up leaves of various types to play 'medicines and doctors', but has stated that he never ate any of the 'medicines'. His mother gave him a 'sugar-ball' to suck and it is likely that he removed this from his mouth from time to time to watch the changing colours. It was 15 - 20 minutes after giving him the 'sugar-ball' that his mother noticed his red face, but she had been absent during this time. She took him for a short walk to a neighbouring house, and during the walk he complained of a dry mouth and said he felt giddy and could not see. He asked for water and appeared very excited. He became panic-stricken about his sight and then found he could not walk. At 5.20 p.m. he vomited (the clear water he had drunk), then for a short while went to sleep, but was thrashing around in his sleep. His whole body became scarlet, his voice was incoherent, and his speech was slurred; the wildly excited behaviour continued and became worse. His bowels had worked normally and his micturition was normal.

He was unlikely to have eaten any plant material and, although the fruit trees had been sprayed with 'pesthion' just a day before, he had not been near them. His cupboards had been sprayed with DDT the previous day.

Examination

At 7 p.m. he was seen by one of us (D.J.G.-S.) and found to have a generalized erythema. He was markedly restless, so much so that it was almost impossible to examine him. His pupils were widely dilated. Phenobarbitone, ½ gr., was given by intramuscular injection. At 8.15 p.m., when seen by J.G. it was still extremely difficult to examine him because of his wild restlessness, and it required both his parents and one of the doctors to hold him down before he could be approached with torch and stethoscope.

The child had a generalized erythema and his pupils were widely dilated and fixed. At times he appeared to respond to questions with a mumbling slurred speech, but on the whole appeared semicomatose. He had a tachycardia but was apyrexial, and was picking at the bed clothes as though hallucinated. There was no neck stiffness or loss of power, and his lungs appeared normal, as did his throat, ears and abdomen.

The diagnosis of poisoning was made. The clinical picture was that of atropine poisoning. A further ½ gr. of phenobarbitone was administered and he was admitted to hospital. While he was being admitted an attempt was made to identify the plant with whose leaves he had been playing, and it was apparently identical with that described by Van der Spuy[3] as *Datura cornigera* Hook.

Progress and Treatment

His stomach was washed out and no vegetable matter was returned. Lumbar puncture revealed a clear CSF with 3 lymphocytes and 25 mg. per 100 ml. of protein. 'Prostigmin', ½ ml., was given by intramuscular injection and repeated 4-hourly until morning. The patient took fluids well despite his excited state, and later (at midnight) semicomatose condition. Fourteen hours after admission he appeared rational and well, and his erythematous rash had faded. His pupils were still moderately dilated, although they were now reacting sluggishly to light, and the patient had some difficulty with accommodation for 3 - 4 days. In spite of this, he was able to read his comics by the second day.

DISCUSSION

Although this appears to be the first time that a case of moonflower poisoning has been reported in South Africa, many gardens in Johannesburg contain this lovely-looking plant and it does seem fairly widely known to be poisonous. In the country districts there is a belief that rubbing a plate with the juice of the moonflower leaf and serving a meal on it will bring death to the recipient.[4] However, there do not seem to be any known deaths in South Africa from consumption of this plant. In this case it is likely that the dose the patient ingested was very small and that if a large amount of the plant had been consumed a fatal outcome might have ensued.

It is interesting to note that in Cuba the giant ant keeps away from the neighbourhood of *Datura arborea* and it does not attack this plant.[5]

Watt states that there is apparently some confusion about the botanical identity of the moonflower in Johannesburg. It may be either *Datura cornigera* Hook or *Datura arborea* L, but if the botanical evidence is non-specific it is most likely to be *Datura cornigera* Hook.[5] The plant contains a mixture of the alkaloids atropine and hyoscyamine, described under the name of daturine.[5] The lay press gave considerable publicity[6] to this case at the time of its occurrence, and it does seem advisable that parents should realize that this plant is dangerous.

SUMMARY

A case of poisoning in childhood due to an unusual plant (*Datura arborea* L or *Datura cornigera* Hook) is described. This appears to be the first time that moonflower poisoning has been reported in South Africa.

We wish to thank Mrs. E. M. Kerr for the botanical help she gave us, and Prof. J. M. Watt for his assistance and interest.

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* Paper received for publication on 8 July 1960.

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EDITORIAL : VAN DIE REDAKSIE

RETROSPECT AND PROSPECT

To pause for a moment, at the turn of the year, in order to make an objective appraisal of the achievements as well as the failures and the lost opportunities of the past year, is a sign of sound self-criticism and emotional maturity. Without doing this it would be difficult to assess the measure of success with which we have discharged our responsibilities. It is however not enough to look back. We must also look forward to the coming year in terms of our experiences of the past and our expectations for the future.

One of the distinctive features of the past year is the fact that we have become aware, perhaps more so than at any other time in the past, of a disconcerting feeling of uncertainty and anxiety. As we pointed out on a previous occasion,[1] this awareness has not only manifested itself in our own country in the political, social, and financial spheres, but it is also present in other countries where it finds expression on national and international levels. Accepted values and customs are disintegrating and changing. Well-established views are being modified, and the whole milieu of our spiritual and practical existence has become fluid.

Another important phenomenon in the field of medical practice arises from the fact that the basic pattern of our medical services is changing rapidly and radically. The family doctor, as previous generations knew him, is fast disappearing. Medical services are being provided more and more by teams of doctors working in clinics and hospitals. In his arresting article on 'The personal doctor', Dr. T. F. Fox,[2] Editor of the *Lancet*, set down in detail his reflections on this subject. Speaking of Great Britain he says 'with hospital specialists almost everywhere accessible, the general practitioner (composite or otherwise) is dead. But the personal doctor is needed more than ever'.

It was interesting to see that this statement elicited a strong reaction from correspondents both in England[3] and in our own country.[4] The general consensus of opinion seems to be, and with this view we concur, that it is quite inconceivable that the general practitioner will disappear from a country like South Africa. There will always have to be men like the general practitioners we have known over years, who are entrusted with the responsibility to treat most of the ill people (including seriously ill patients), who are spread over the length and breadth of this vast sub-continent. But the general practitioner must remain a personal doctor. In so far as he is able to fulfil this rôle, his status as a doctor and a human being will be enhanced. In this country we will never be able to do without specialists (especially consulting specialists) *and* general practitioners, but a heavy responsibility rests on both to maintain their relationship with their patients on the level of the personal doctor in the true sense of the word.

The feeling of uncertainty and anxiety was also noticeable during the past year in the field of the economics of medical practice. The tendency to render medical services against a background of medical aid societies and insurance company medical aid becomes more pronounced every day. This is probably inevitable because of the continuous and drastic rise in the cost of living, including the cost of medical services. The medical profession is, however, not completely powerless in this respect. What it can and should do is to ensure that in negotiating for an acceptable *modus operandi* between itself and the vested interests concerned, it will maintain its status and dignity as a profession, whose whole reason for existence is summarized in one word: service.

In South Africa, as in other countries, the year 1960 will be remembered as the year which inaugurated the victory over poliomyelitis. South Africa has joined many other countries in an all-out attempt to banish poliomyelitis completely by organizing a mass campaign of vaccination with Sabin strains of live attenuated poliovaccine. All evidence goes to show that we are producing the safest and most effective live poliovaccine available. However, as we pointed out when this matter was discussed,[5] we are under the obligation to ensure that this campaign is undertaken on a truly national and community basis. It seems therefore fitting to reiterate the warning that we may be able to wipe out poliomyelitis completely in South Africa, but it may be introduced again from some other country. Unless all children are immunized in infancy against poliomyelitis, as they are against smallpox, they will be at great risk if wild strains of poliovirus reappear. It may well be necessary in the future to institute compulsory vaccination against poliomyelitis to obviate the possibility of a catastrophe.

Our future, as Dr. Gear points out so convincingly in his article on page 1109 of this issue of the *Journal*, is intimately bound up with the trend of events in the wider world. It is, for instance, impossible to ignore the fact that the Western World has been living in a state of war or of armed peace ever since 1939. According to all calculations, about 70 million people had to leave their homes as refugees during World War II; a further 40 million have had to leave their homes subsequently; and there is once more an alarming stream of refugees from the various African states. These facts cannot but reflect unfavourably on the community as a whole and on the guardians of its health and happiness in particular. As doctors we cannot ignore the implications of this problem, as we cannot ignore the basic instability of the world of which it is a symptom.

Each one of us, whether he accepts it or not, shares the responsibility for the wellbeing and survival of the human race. In the words of John Donne 'any man's death diminishes me, because I am involved in mankind; and therefore never send to know for whom the bell tolls; it tolls for thee'. It would appear that we have embarked upon projects which may lead to the annihilation of the world as we know it. It is therefore imperative

that we examine the present world-wide armament race in atomic weapons in the light of all available evidence.

We need not dwell on the disaster of Hiroshima – the facts are known only too well. But recently other alarming reports have come from Japan.[6] It was reported that in 1955 in the area affected by atomic bomb explosions years ago, there were some twenty children born distorted in some way. The Next year, 1956, the number was thirty-five, and in 1957, sixty-five. That is, the number of such births has multiplied by three in three years. These facts are probably not yet entirely interpreted and completely understood, but if they mean what they seem to mean, it may be that far greater damage has been done to the early undeveloped ovum than anyone has known before. It is difficult to imagine a more significant warning on the implications of our actions.

Illuminating light has also been shed on other aspects of our medical and social life in which we have failed lamentably to meet our obligations. A short while ago Dr. Neudörfer-Redlich,[6] the representative of Austria on the Board of the United Nations Children's Fund quoted the fact that there are now about 900 million children in the world, about 600 million of whom are hungry and sick. These are therefore children in relation to whom the world is not fulfilling even the simple responsibility of providing food and reasonable medical care.

As a result of all these circumstances, the place and status of the medical profession in the world today is being questioned more than ever before. It is therefore necessary for the profession as a whole to review its basic tenets and values, and to meet the challenge of a changing world in such a way that its status as a learned body of professional men remains untarnished. Furthermore, it behoves us all as civilized people to embark on many reappraisals, in particular with reference to our responsibilities as human beings. Let us, at the turn of this critical year, rededicate ourselves to the principles of charity and humanity, and let us find the justification for our existence in the coming years in the true meaning and spirit of the adage of the Romans of old: to work is to pray; and the labour in which we find our joy, heals the pain.

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BY DIE WISSELING VAN DIE JAAR

Om by die wisseling van die jaar 'n oomblik stil te staan en eerlik terug te kyk op die geleenthede en prestasies, maar ook op die verlore kanse en mislukkings van die afgelope jaar, is 'n teken van gesonde selfkritiek en emosionele volwassenheid. Daarsonder sou dit moeilik wees om 'n objektiewe bepaling te maak van hoe goed of hoe sleg ons rekenskap gegee het van ons rentmeesterskap. Om terug te kyk is egter nie genoeg nie. Ons moet ook die jaar wat voorlê tegemoetsien in terme van ons ervarings van die verlede sowel as in terme van ons verwagtinge in die toekoms – want dit is 'n teken van verantwoordelike verstandigheid.

Een van die kenmerke van die afgelope jaar is dat ons, miskien meer as in die verlede, bewus geword het van 'n sekere gevoel van onrustigheid en onsekerheid wat, soos ons by 'n vorige geleentheid aangetoon het,[1] nie net in ons eie land waar te neem is in die politieke en maatskaplike en finansiële lewe nie, maar wat ook aanwesig is in baie ander lande waar dit op die nasionale en internasionale vlakke tot uiting kom. Vaste waardes en gebruike is aan die verander en aan die kantel. Gevestigde opvattinge word gewysig en die hele milieu van ons geestelike en praktiese bestaan het meer vloeibaar geword.

Een van die belangrikste verskynsels op die gebied van die beoefening van die medisyne is die feit dat die basiese patroon van geneeskundige dienste dreig om radikaal te verander. Die gesinsdokter, soos hy bekend was aan vroeëre geslagte, is byvoorbeeld aan die verdwyn. Mediese dienste word al meer gelewer teen die agtergrond van spanne dokters in klinieke en hospitale. In sy opspraakwekkende artikel in die *Lancet* oor ‚The personal doctor' het dr. T. F. Fox,[2] redakteur van die *Lancet*, 'n deurdringende ontleding van hierdie probleem gegee. Met betrekking tot Groot-Brittanje het hy o.a. gesê, ‚met hospitaalspesialiste omtrent orals beskikbaar, is die algemene praktisyn dood. Maar, daar is 'n groter behoefte as ooit tevore aan die persoonlike dokter'.

Dit was interessant om te sien dat daar uit sowel Engeland[3] as uit ons eie land[4] skerp reaksie gekom het oor hierdie uitspraak. Die algemene gevoel skyn te wees, en daarby sluit ons ons ook aan, dat daar geen sprake daarvan kan wees dat die algemene praktisyn in 'n land soos Suid-Afrika kan verdwyn nie. Daar sal en moet altyd mense wees, soos die algemene praktisyn, wat verantwoordelik moet wees in plattelandse gebiede vir die versorging van verreweg die meeste siektes en kwale van die lede van daardie gemeenskap, insluitende die versorging van ernstige siektes. In die mate wat die algemene praktisyn hierdie dienste verrig ook as 'n persoonlike dokter, sal sy status as mens en dokter hoër wees. In Suid-Afrika kan ons dus nie klaarkom sonder spesialiste (veral konsulterende spesialiste); *en* algemene praktisyns nie, maar op albei rus die verantwoordelikheid om hulle verhoudings tot hul pasiënte te bly bewaar op die vlak van die persoonlike dokter in die ware sin van die woord.

Die gevoel van onrustigheid en onsekerheid waarna ons hierbo verwys het, het ook gedurende die afgelope jaar veral tot uiting gekom op die gebied van die ekonomiese organisasie van die mediese praktyk. Mediese dienste word al meer gelewer teen die agtergrond van hulp- en verseke-ringskemas. Aangesien die lewenskoste in die algemeen (en dus ook van mediese dienste) 'n steeds stygende kurwe vertoon, is hierdie veranderende patroon van mediese dienste eintlik onvermydelik. Wat die mediese professie egter wel *kan* doen en *moet* doen is om te sorg dat die status en die waardigheid van die professie nie in die gedrang kom by die ekonomiese organisasie van die mediese praktyk nie.

In ons land, soos in ander lande, sal die jaar 1960 ook bekend staan as die jaar wat die oorwinning oor polio-

miëlitis ingelui het. Suid Afrika staan saam met ander lande in 'n omvattende poging om, onder andere, deur middel van die toediening van lewende verswakte poliosiukentstof, poliomiëlitis geheel en al die hoof te bied. In hierdie verband weet ons dat al die gegewens daarop dui dat ons in hierdie land die veiligste en die mees doeltreffende lewende polio-entstof wat beskikbaar is, vervaardig. Soos ons aangetoon het toe hierdie saak bespreek is,[5] spruit daar uit ons optrede in hierdie verband in die verlede egter 'n groot verantwoordelikheid vir die toekoms, om naamlik toe te sien dat hierdie onderneming op 'n volledige gemeenskapsbasis aangepak word. Dit sal dus goed wees om hier weer die waarskuwing te herhaal dat, tensy alle kinders op 'n vroeë stadium teen poliomiëlitis ge-ent word, soos die geval is met pokkies, hulle bloedstroom sal word aan groot gevare as wilde stamme van die poliovirus weer te voorskyn kom. Dit mag wel nodig wees dat verpligte inenting teen poliomiëlitis in die toekoms ingestel moet word om die moontlikheid van 'n katastrofe te voorkom.

Ons lotgevalle, soos dr. Gear so oortuigend aantoon in sy artikel op bladsy 1109 van hierdie uitgawe, word ook geraak en bepaal deur die gebeurtenisse in die wyere wêreld. Ons kan byvoorbeeld nie onverskillig staan teenoor die feit dat die Westerse wêreld nog steeds, sedert 1939, in 'n staat van oorlog of beleërde vrede lewe nie. Die feite dat daar volgens berekening nagenoeg 70 miljoen mense was wat hul huise as vlugtelinge *gedurende* die laaste wêreldoorlog moes verlaat; dat *sedert* die oorlog nog 'n verdere 40 miljoen mense deur dieselfde lot getref is, en dat daar nou weer die groot stroom vlugtelinge uit die verskillende lande en state in Afrika is, kan nie anders nie as om 'n ongunstige neerslag te hê op die samelewing in die geheel. En daarom is dit ook duidelik dat ons as geneeshere hierdie probleem – en die basiese onstabiliteit in die wêreld waarvan dit een simptoom is, nie kan veronagsaam nie.

Elkeen van ons het ook, teen wil en dank, mede-verantwoordelik geword vir die welsyn en voortbestaan van die menslike ras. Daar is gedurig bewyse dat ons ons op paaie begeef wat kan lei tot die algehele vernietiging van die wêreld soos ons hom ken. Dit sal dus goed wees om die huidige wedloop om bewapening met kernwapens te sien teen die agtergrond van wat alreeds bekend is. Die tragiese feite van Hiroshima is te goed bekend om hier te herhaal. Maar, onlangs het daar uit Japan 'n verdere ontstellende berig[6] gekom dat daar in 1955 in die gebiede wat jare gelede betrokke was by ontploffings van atoombomme, ongeveer twintig kinders gebore is wat op een of ander manier mismaak is. In die volgende jaar, 1956, was hierdie syfer vyf-en-dertig, en in 1957, vyf-en-sestig. Die aantal het dus meer as verdriedubbel in drie jaar. Wat die implikasies van hierdie feite is, weet ons nie; as hulle egter beteken wat hulle skyn te beteken, kan dit wees dat veel meer skade berokken is aan die vroeë onontwikkelde ovum, as wat moontlik geag is. 'n Ernstige waarskuwing om na te dink oor die gevolge van ons dade op 'n globale grondslag, kan ons skaars bedink.

Interessante lig word ook gewerp op ander gebiede waarop die wêreld as 'n geheel gefaal het in sy verantwoordelikheid ten opsigte van die voortbestaan van die mensdom. Dr. Neurdörfer-Redlich,[6] die verteenwoordiger van Oostenryk op die Raad van die Verenigde Volke se Kinderfonds, het gesê dat daar vandag in die wêreld, volgens berekening, omtrent 900 miljoen kinders is waarvan omtrent 600 miljoen honger en siek is. Ons kan skaars 'n sterker aantyging bedink van die mate en omvang waarin die wêreld gefaal het in die nakoming van sy basiese verpligtinge om te sorg vir die voeding en die mediese versorging van die kinders wat hom toevertrou is.

Onder al hierdie omstandighede het die plek en status van die mediese professie in die moderne wêreld meer as ooit tevore in die gedrang gekom. Dit is dus noodsaaklik dat ons as 'n professie ons eie uitgangspunte en waardes moet hersien. Op die mediese professie rus die verantwoordelikheid om die uitdaging van die veranderde omstandighede en waardes in 'n veranderende wêreld te aanvaar en op so 'n manier te verwerk dat sy status as 'n liggaam van geleerdes en van professionele persone, wat 'n spesiale diens het om te lewer, onaagetas bly. Laat ons bowe alles ons vreugde en die regverdiging vir ons bestaan in die jare wat voorlê vind in die toepassing van die ware gees en gesindheid van die uitspraak van die ou Latyners wat hierin geglo het: om te werk is om te bid, en die arbeid waarin ons 'n lus het, heel die pyn.

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SPACE MEDICINE*

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Space medicine is the key to Man's survival in a new dimension. It represents his only hope of staying alive in the hostile environment of space and of his subsequent safe return to earth.

Until recently, space flight appeared to be only a remote possibility of the far distant future. As a direct result, however, of considerable research and development in the field of rocket technology, dating from the brilliant pioneering by Robert Goddard and culminating in the spectacular achievements of Werner Von Braun and others, it is at present not merely a possibility but a very distinct probability.

SPACEMEN AND SPACE VEHICLES

With assorted sputniks, satellites, solar rockets, and other devices in orbit round the earth and the sun, the public may be forgiven for taking it for granted that soon enough now a fellow human-being will be shot off into space in one of these vehicles. However sensational and eagerly awaited such an event may be, the assurance can be

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given that as of now certain considerable physical and psycho-physiological barriers remain to be overcome before Man himself can become an interplanetary traveller.

While rocket engines were being developed during the last decade or two to provide power for a space vehicle, a great deal of human engineering has been taking place to provide Man with the necessary protective equipment to withstand the rigours of space travel.

Simultaneously a vast amount of fundamental research has been undertaken by workers in the field of aviation medicine with the result that equally spectacular advances have been made in this direction with a view to keeping Man abreast of the demands made on his physiology by the performance factors inherent in modern high-performance turbojet and rocket aircraft.

From the very considerable endeavours by workers in these related fields the new concept of space medicine has emerged. Space medicine is a direct development and extension of aviation medicine and deals with the same fundamental problem of how to keep Man, who is confined by relatively narrow physiological limits of pressure, temperature and atmospheric composition, alive at altitudes and speeds of a magnitude unheard of even a few years ago. Seeing Man safely past these physiological and physical barriers is the abiding and exacting task of aviation and space medicine.

To achieve space flight both Man and his vehicle must be adapted to the rigid requirements of the space environment. In other words, to be effective, space medicine must be wedded to space engineering, since failure of either Man or machine in space will be an irretrievable disaster. Space medicine will ensure that everything that can possibly be done in advance to ensure the safety, survival and performance of those who will be the first to orbit the earth and later to soar into true space, will in fact be done.

Whenever space or rocket flight is mentioned it conjures up visions of manned trips to the moon and the various planets. At the present moment there are probably a dozen or more satellites in orbit which prove the feasibility of space flight and show that rocket propulsion has opened up the true vertical dimension of flight. As a result of intensive study of the diverse and complicated aspects of space medicine over several years, authoritative opinion now holds that from the point of view of human tolerance and of the rational functioning of spaceship crews, short duration flights such as limited orbiting in the space-equivalent region near the earth, are physiologically acceptable and are presently attainable. An example of this type of flight is the X-15 project which is currently under way in the United States Air Force. It is envisaged that, at the present rate of development, true space flight will eventually become possible and enable Man to break his bonds with earth and so achieve the extravagant accomplishment of penetrating beyond the threshold of space.

EVOLUTION OF SPACE FLIGHT

What then, one may ask, is holding manned space flight back? A review of the known physical and psycho-physiological barriers to flight by Man into space shows that none are apparently insuperable, yet a great deal of information is still required before these flights can take place. It can safely be predicted that the full exploitation of the application of the revolutionary rocket principle of propulsion to space flight will probably follow the pattern of a gradual evolution. With this in mind a simple classification of the present and future stages of manned flight, which will allow a realistic assessment and evaluation of the whole question, can be devised.

The stages of the evolution can best be understood by examining 3 factors: (1) The physiological and mechanical properties of the space environment; (2) the speeds attained in space flight; and (3) the distances rockets travel over and away from the earth.

1. *Environment*

The border between the atmosphere and space in astrophysical and meteorological terms lies at an altitude of approximately 600 miles. As an environment for the space pilot and the rocket carrier the atmosphere shows conditions typical of space at much lower altitudes. One encounters within the atmosphere, beginning at 50,000 feet, a region which becomes increasingly space-equivalent with regard to one or more of the conditions important for manned flight. These conditions are: absolute anoxia at 50,000 feet, the vaporization of body fluids at 63,000 feet, the necessity for a sealed cabin at 80,000 feet, the possibility of collisions with meteors from 75,000 feet and the darkness of space from 100 miles.

Above 120 miles we find space-equivalence in almost all respects. The atmospheric region from 50,000 feet, or about 10 miles, up to 120 miles may be considered partially space-equivalent. This border-zone of space is also called the 'aeropause' because the effects of the atmosphere on man and craft begin to come to an end. It is the region in which flight is in fact currently possible. The region above 120 miles is totally space-equivalent since the atmosphere is imperceptible to the flyer, although for the astronomer it exists up to 600 miles.

This being true, the rocket-powered X-2 plane which has carried a man to 130,000 feet, and the recent balloon flight by Major Simons of the United States Air Force to approximately 120,000 feet, occurred in a region which is space-equivalent to a high degree. The flight by the late and much lamented dog in Sputnik II took place in conditions of total space-equivalence. From the standpoint of environment we have now reached the partial space-equivalent phase of manned space flight.

2. *Speed*

Just as certain levels in the atmosphere are characteristic in the environment around the earth, so there are certain characteristic points in the factor of speed. They also mark distinctive stages in the development of flight.

The first of these is the speed of sound — 762 m.p.h. (Mach 1 at mean sea level). The present record in the supersonic range exceeds Mach 2. In the higher range of Mach 3 and 4 in horizontal flight, centrifugal forces begin to counteract gravitation to an increasingly noticeable degree and bring on the phenomenon of decreased weight or subgravity.

At 18,000 m.p.h., or approximately 5 miles per second, in horizontal flight the gravity-free or weightless state is finally reached, where centrifugal force equals the gravitational pull of the earth. This speed is known as the orbital or circular velocity and is the minimum speed necessary to place an artificial satellite in fixed circular orbit about the earth. This achievement was first accomplished by the Russians with their Sputnik I.

At 7 miles per second or 11 kilometres per second, the craft breaks away from the earth's gravitational pull and escapes into the depths of interplanetary space. This is called the escape velocity.

As is well known, the 3-stage rocket has demonstrated its ability to attain orbital velocity in the totally space-equivalent region up to a reported altitude of thousands of miles. The attainment of escape velocity with multistage rockets has been dramatically demonstrated by the Russian Lunik or lunar probe which has successfully escaped from the earth's gravitational field and is now a minor planet revolving round the sun.

3. *Distances*

The various stages of flight can also be classified by the factor of the distances they cover. The craft may fly from one point to another on the globe, in a certain distance around the globe, or far away from the globe into space. If the factors of environment, speed and distance with their characteristic levels are combined, an evolutionary course in the development of manned flight is apparent.

The long distance flights of today take us at subsonic speed, under normal gravitational conditions in pressurized cabins, through the lower regions of the atmosphere from one point to a distant point on the globe, across a number of time zones and/or across zones of different seasons in a single day. These are global atmospheric flights. This epoch in flying began when Lindbergh crossed the Atlantic in 1927.

We are now on the threshold of the next stage. Rocket-powered planes will take us at supersonic speed under sub-gravitational conditions and in sealed cabins through the space-equivalent regions of the atmosphere from one point on the globe to an extremely distant point in a matter of hours. Still bound to the earth, these journeys will fall into the category of global space-equivalent flight, e.g. the X-15 project.

The precursors of the long-distance space-equivalent space flights are seen in the short-distance, short-lived flights of rocket-powered planes of today. They can be termed local space-equivalent flights. As soon as the orbital velocity of 5 miles per second is reached, flights of long duration around the globe in a satellite orbit under conditions of zero gravity and in an environment equivalent to space will become possible. But these craft will still operate within the gravitational hold of the earth and will remain within the earth's vicinity. This eventual stage may be called circumplanetary space flight.

The next step will follow when the escape velocity of 7 miles per second is reached. When eventually a manned rocket leaves the earth, attains this speed and moves freely in space, then we will have arrived at interplanetary space flight or what may be called space travel.

A classification of space-flight evolution such as this has been devised by Dr. Hubertus Strughold of the Department of Space Medicine, United States Air Force, and gives a clearly defined and realistic picture of the stage at which we stand today and of the possibilities we may expect in the future (Table I).

At present we are actually in the first phase of space flight, the phase defined as global space-equivalent flight. Solution of the medical problems in this stage is therefore of immediate concern to the physiologist, the engineer and the pilot. What are the special medical problems encountered in space flight?

MEDICAL PROBLEMS OF THE SPACE FLIGHT

Many of these problems are basically those of high altitude flight as we know it today and most of the medical problems involved in true space flight are encountered in the stage of global space-equivalent flight. It has in fact been said that the fingers of space medicine reach right down through the atmosphere to as moderate an altitude as 10,000 feet, above which hypoxia commences. The most critical areas in both aviation- and space-medicine are naturally concerned with the protection of aircrew against the hazards of high-altitude and high-speed flight both inside and outside the atmosphere of the earth.

Hypoxia

In considering the aeromedical aspect of flight at extreme altitudes, the central problem concerns lack of oxygen. Hypoxia is a syndrome that results from inadequate oxygenation of the tissues due to a decrease of the partial pressure of oxygen in the inspired ambient air.

Symptoms

The symptoms are dependent on a series of variable factors like absolute altitude, rate of ascent, duration at altitude, ambient temperature, physical activity, and individual susceptibility and tolerance, but the inevitable end-result is a progressive descending depression of the central nervous system and a disruption of the psychomotor functions, causing serious incapacity of the pilot and invariably leading to loss of control of the aircraft.

To obviate this danger it has long been standard practice to provide an oxygen system to supplement the alveolar oxygen partial pressure and at present an automatic pressure-demand oxygen regulator is used on all jet aircraft. Unfortunately the protection afforded by even the most sophisticated oxygen system is not unlimited since present-day high performance aircraft can comfortably exceed altitudes where the total ambient pressure is not as high as the partial pressure of oxygen necessary for the required normal 90-95% oxygen saturation of the blood. Such a critical height occurs at the moderate altitude of 34,000 feet where the barometric pressure is 187 mm.Hg. At this altitude the pilot on 100% oxygen will have an alveolar partial pressure of 160 mm.Hg which is equivalent to the normal conditions at sea level. However, on exceeding 34,000 feet on 100% oxygen, he will exhibit symptoms of hypoxia ranging through the undetectable, to the compensatory, the disturbance, and ultimately the critical stages ending in death exactly as if he were ascending above 10,000 feet without oxygen.

Pressurized Cabins

To overcome this limitation, use is made of a pressurized cabin to surround the pilot artificially with a pressurized environment which is equivalent to an altitude lower than the height at which the aircraft is flying.

Even cabin pressurization, however, is not the complete answer, because in the rarefied air above 50,000 feet very large and heavy compressors are needed to maintain cabin pressurization. Between 60,000 and 70,000 feet the air-

TABLE I. CLASSIFICATION OF DEVELOPMENTAL STAGES IN MANNED FLIGHT

	1. Global atmospheric flight	*2. Global space-equivalent flight*	*3. Circumplanetary space flight*	*4. Interplanetary space travel*
Distance	Geographic dimensions	Geographic dimensions	Vicinity of earth	Interplanetary dimensions
Environment	Lower atmosphere	Space-equivalent regions of the atmosphere	Circumplanetary space	Interplanetary space
Speed	Sub- and supersonic speed	Supersonic speed	Orbital velocity	Escape velocity
Gravity	Normal gravity—1 G*	Sub-gravity	Zero gravity	Zero gravity

*G = Gravity

craft will encounter the ozone layer between the stratosphere and the ionosphere, and ozone in the cabin in concentrations of more than 6 parts per million under a pressure of 2·7 lb. per square inch is fatally toxic.

While cabin pressurization up to a certain altitude is a satisfactory solution, the attainment of higher altitudes requires an additional method of ensuring the survival of the pilot should cabin pressure be lost as the result of explosive decompression.

The consequence of such an explosion is to transport the pilot instantaneously from his artificial atmosphere inside the pressurized cabin to the actual altitude he happens to be flying at; for instance from, say, 18,000 feet to 55,000 feet in a split second. Now above 50,000 feet a given volume of gas will expand to 14 times its volume at mean sea level. Seeing that all the gases trapped inside the body in the lungs, gastro-intestinal tract, and other cavities are subject to this expansion, the pilot may be in danger of rupture of his alveoli, with subsequent air embolism, should the expanded gases not be able to escape freely.

Pneumatic Counter-pressure Suit

To obviate this danger of sudden exposure to the hazards of extreme altitude the pneumatic counter-pressure suit was introduced. This garment is in effect a personalized pressure environment which is barostatically controlled and is instantaneously inflated to maintain adequate pressurization around the pilot's body when explosive decompression takes place. This application of counter-pressure to the body in conjunction with emergency pressure breathing will give the pilot a reasonable chance of survival provided he is able to descend quickly to lower altitudes.

At an altitude of 63,000 feet, however, the total barometric pressure drops to a mere 47 mm.Hg, which is equal to the water-vapour pressure of the saturated gases in the blood-stream at the normal body temperature of 37° C. Exposure to this altitude would lead to boiling of blood in the vessels and filling up of the lungs with steam. This altitude is known as the space-equivalent because survival times at any altitude above 63,000 feet would be identical. From here onwards only 12% of the total blanket of the atmosphere remains and for all practical purposes space flight commences.

Hermetically-sealed Cabin

For the purpose of space flight, and indeed for all sustained manned flights above 70,000 feet, all the aids to conventional high altitude flying become inadequate in themselves and such flying is only possible when Man carries his own atmosphere in an hermetically-sealed cabin. Such a self-contained sealed cabin is the essential basis for the spaceships of the near future and, like the rocket motors which must be used for propulsion at altitudes of 80,000 feet and above, it is atmospherically independent and will carry its own oxygen supply.

This necessitates the provision of a closed ecological system in which Man can live for a considerable period. It is essential that whatever is needed by Man to sustain him adequately for the entire duration of any contemplated flight, including air, water, food and recreation, must be complete within the sealed capsule of the vehicle. In addition to a constant supply of these necessities, all waste materials must be eliminated or converted for re-use. If this capsule can be made efficient then the absence of ambient air, as such, does not present a problem from the respiratory standpoint. What does pose a problem, however, is the supply of sufficient oxygen for long flights which may last a few weeks. Ordinary containers will do for short flights, but will be impracticable for longer trips.

Studies are currently proceeding concerning the use of plants for photosynthesis, oxygen production and carbon dioxide removal in a closed system. It has been determined, for instance, that an 8-cubic foot suspension of a certain green alga, *Chlorella pyrenoidosa*, would be sufficient to balance the gas metabolism of one man and do away with the need for bulky cylinders. Although this is an attractive solution from an academic point of view there are enormous biological and engineering difficulties in the way, but it is hoped eventually to achieve artificial photosynthesis and to devise methods for the reconversion of waste solids and fluids to a usable state.

There are at present sealed cabin simulators in use which now serve as research tools and will later be used for purposes of conditioning.

Stresses of Rocket Thrust

If it is now assumed that this sealed capsule will adequately protect the space traveller against the hazards of anoxia and supply him with a personalized pressurized environment. The next series of hazards lie in the field of tolerance to the thrust of rocket propulsion and the orbital or escape velocities involved.

Experience has shown that very high speeds are not significant *per se*, and that there is little doubt that Man, if properly protected, will tolerate a constant velocity well in excess of escape velocity.

But speed is vitally important as a producer of stress mainly through the application of linear, angular and radial acceleration.

It has been experimentally determined in the human centrifuge that the average healthy young pilot can tolerate pressures up to 5 positive G* for 5 seconds, 3 negative G for 3 seconds and 12 transverse G for 3 seconds before lapsing into unconciousness. To improve tolerance, an automatic anti-G suit has been developed which provides automatically controlled counter pressure over certain vital body regions like the abdomen and lower limbs, to prevent the pooling of blood under the influence of increased gravitational pull.

As in conventional flight the most critical phases of rocket flight occur at take-off and landing. Unfortunately, in these critical procedures the principles of rocket engineering run counter to the interests of the physiologist. The engineer requires maximum acceleration in the shortest time, but human tolerance even in an anti-G suit is limited. However, it has been calculated that Man, properly conditioned and protected, will be able to withstand the application of high G-values for as long as it would take a 3-stage rocket to attain escape velocity.

The order of values the physiologist will have to deal with varies from 10 G attained for an acceleration time of approximately 2 minutes to 4 G during an acceleration lasting approximately 6 minutes.

* G is the symbol for normal gravity at mean sea-level.

Reaction-time Limitations

Apart from the component of acceleration, the attainment of hypersonic speeds expose yet another inflexible physiological limitation in Man, namely that of reaction time. Although perfectly adequate in terrestrial situations, human reflexes, which travel at a mere 200 m.p.h., become totally inadequate at these speeds.

A few insignificant seconds required under normal situations before a potential danger can be seen and evaluated, and evasive action can start, attain awesome proportions in high-velocity flight. Pilots of aircraft flying at supersonic speed in opposite directions may in fact only see each other after they have passed. Known as the 'coming-past interval', this phenomenon occurs where the sum of the closing speeds exceeds the speed of transmission of the visual images of the eye to the brain.

It can therefore be defined as the present perception of an event that has already occurred in the past. The problems resulting from those basic reaction-time limitations of human control can, however, be overcome by the installation of electronic devices which can react much faster than man to control the aircraft or spaceship.

Orientation in Weightless Conditions

Having attained escape velocity, the spaceship will break away from the earth's gravitational pull and the crew will experience a state of weightlessness. When the normally-present stimulus of gravity is lacking, some doubts are entertained regarding deterioration of Man's sensory and motor performance.

Spatial orientation, for instance, depends largely on the presence of gravity, and to orientate himself Man will have to be conditioned to depend on visual re-orientation. For short periods Man may be able to adapt himself to weightlessness, but it becomes important for the physiologist to know how long the interplanetary navigator must be subject to the gravity-free state.

Trips to Venus or Mars at a speed of say 30 kilometres per second over distances of about 100 and 200 million kilometres, respectively, amount to about 5 and 10 weeks, or for a round trip, 10 and 20 weeks, respectively.

If sufficiently large quantities of fuel energy are available, this travelling time could be reduced considerably by continuous acceleration during the first half, and by corresponding deceleration during the second half of the journey. This has the further advantage that during the whole trip a small component of acceleration which would simulate gravity could be present with a steady acceleration of say 0·1 G. The trip to Venus and Mars could then be carried out in about 5 - 6 days. The spaceship would, in this instance, attain a peak velocity of 200 to 250 kilometres per second relative to the sun, which is roughly 1/10,000 of the speed of light.

Other Space-flight Problems

There are many more problems, classified under the physiological-environment problems of space flight, which include such matters as solar and cosmic radiation and the danger of collisions with meteorites.

Physical Problems

The maintenance of a proper temperature level within the ship is of major importance. Fortunately, knowledge of the laws of radiation in connection with the respective spectral absorption co-efficients of the hull's material permits a fairly accurate calculation of the equilibrium temperature the ship will attain. Computed temperatures during the most adverse conditions of re-entry are of the order of 150° F. for less than 5 minutes. This is considered to be well within acceptable limits for human beings.

Cosmic rays, which include bombardment with heavy primary nuclei, may constitute a serious radiation hazard to space travellers, but experiments with animals in very-high-altitude balloons indicate that depigmentation of the hair is the only observed defect so far.

The recently discovered Van Allen band of intense radiation is important only to manned earth-orbiting flights but not to true interplanetary flight since it is only a local phenomenon, and at escape velocity the spaceship will pass through this layer so quickly that no significant radiation is feared.

As regards the probability of collisions with meteorites it has been calculated that a collision of the spaceship with a meteorite must be anticipated within the period of about 1 month. These figures constitute a considerable hazard for the crew of a spaceship. The high velocities of meteorites give them the power to puncture even thick steel plates. The collision with a meteorite of several hundred grams, which size fortunately is very rare, would, by causing explosive decompression and instantaneous loss of the cabin air, be catastrophic.

Psychological Problems

A final vast complex of problems is more of a psychological nature, including the problems of psychic aptitude, fatigue, claustrophobia, etc. A peculiar problem is the recent spate of reports by pilots of very-high-flying aircraft of being completely free of all earthly associations; this has been termed the 'break-off phenomenon'. This overwhelming sense of detachment from the earth may adversely affect air-crew performance, but prior knowledge and adequate conditioning may enable Man to adapt himself successfully even to the strange environment of space flight.

The chief subjective feelings related to this break-off phenomenon are those of remoteness, loneliness and anxiety, with the ever-present fear of permanently losing contact with the earth. These manifestations may lead to a serious loss of efficiency in the performance of crew members.

To explore these subjective phenomena research is at present being conducted by the United States Air Force in the so-called space chamber. Various subjects have in fact been making week-long make-believe voyages into space under accurately simulated space-flight conditions. Eventually, spaceship crews will undergo conditioning flights in such chambers preparatory to crossing the vertical frontier into outer space.

CONCLUSION

Will these manned flights take place in the near or, indeed, the foreseeable future? Informed opinion is not unanimous on this score, but in conclusion I should like to quote the views expressed by Dr. F. L. Whipple, Director of the Smithsonian Astrophysical Laboratory in Massachusetts. According to him the American space-flight timetable calls for the following:

1. Sending a satellite with scientific intruments around the moon and back again by 1960.
2. Landing scientific equipment on the moon by 1961.
3. Placing a man in an outer-space orbit 2,000 miles up and returning him safely to earth by 1962.
4. Allowing a man to circumnavigate the moon in a rocket and returning him to earth by 1965.
5. Sending a small manned expedition to the moon by 1968.

OPSOMMING

Oorlewing in die vyandige omgewing van die buitenste ruimte sal grotendeels deur die toepassing van die beginsels van ruimtegeneeskunde bepaal word. Tot onlangs is ruimtereise as denkbeeldig beskou, maar vandag nader hierdie moontlikheid sy verwesenliking.

Daar is egter nog baie fisiese en psigo-fisiologiese probleme wat finaal opgelos moet word alvorens die mens met veiligheid ruimtereise kan aandurf. Baie van hierdie probleme is reeds deur navorsers in die lugvaartgeneeskunde voorsien en bestudeer, maar ruimtegeneeskunde is feitlik 'n nuwe begrip wat spruit uit die ontsaglike mediese en tegnologiese vooruitgang van die laaste paar jaar. In hoofsaak is die ruimtegeneeskunde toegespits op die sentrale probleem van menslike oorlewing op ongehoorde hoogtes en snelhede.

Ingeligte ruimtegeneeskundiges gee inderdaad reeds die versekering dat hierdie probleme nie in die lig van huidige kennis onoorkombaar is nie. Ontwikkeling vind egter nog plaas in die toepassing van hierdie kennis op ruimtevlug.

'n Poging is aangewend om die probleme wat hier bespreek word in perspektief te stel teenoor die astrofisiese eienskappe van die ruimtes. Verder word 'n reeks fisiologiese vraagstukke van die vlieënier bespreek, soos hipoksie, die uitwerking van radiale versnelling en verdraagsaamheid met betrekking tot straal- en vuurpylvoertuie met hoë prestasie, verlies van swaartekrag, psigiese probleme, ens.

'n Tydtafel vir ruimtereis word gegee.

MINUTES OF MEETING OF FEDERAL COUNCIL HELD IN VEREENIGING ON 19, 20 AND 21 OCTOBER 1960

(Continued from p. 1104 of the Journal *for 24 December)*

PARLIAMENTARY COMMITTEE

86. *Report of the Parliamentary Committee.* In the absence of Dr. Struthers, the Chairman of the Committee, Council *Agreed* that Dr. Turton present the Report.

In presenting the Report, Dr. Turton mentioned that the Committee had met on 3 occasions since the last Meeting of Council.

87. *Rules for the Registration of Medical Technologists.* It was reported that the Committee had recommended to the Medical Council certain amendments to the rules relating to the registration of medical technologists. The Medical Council had, however, subsequently resolved 'That the present rules for the registration of medical technologists be not amended at this stage'.

Council *Noted* the report and *Agreed* that no further action be taken.

88. *Discrimination by Professional Provident Society on Grounds of Race.* It was reported that a non-European member of the Association had complained that this Society loaded its rates to non-European medical practitioners.

The Association's representative on the Board of the Society, Dr. Penn, stated that he had taken up this matter on behalf of the member and had been informed that the loading was not based on racial grounds but on environment and insurance company statistics.

Discussion followed, and finally Council *Resolved* that the arguments put forward by the Professional Provident Society be noted but that the Association's representative on the Board of the Society be asked to press the matter on behalf of the member.

It was further *Resolved* that the doctor concerned be informed that the Association had been assured that there was no discrimination on grounds of race, and that further representations would be made on his behalf.

89. *Salary Scales – Non-European Doctors.* The Committee directed the attention of Council to the Minutes of a meeting of the Committee held on 20 June 1960, from which it would be noted that the Committee, in accordance with the instructions of Council, continued to take note of this matter. It was pointed out that as the Association subscribed to the policy of no discrimination in respect of colour, race, creed or sex, the Association would continue to resist discrimination against its non-European members in respect of salary scales.

Council *Agreed* that at this stage it be *Noted* that the matter was still before the Minister of Health awaiting his decision.

90. *Committee of Enquiry into Family Allowances.* The Committee directed the attention of Council to the fact that it had requested the Medical Officers of Health Group to submit evidence to the Committee of Enquiry into Family Allowances on behalf of the Association. *Noted.*

91. *Radium Therapy.* The Committee directed attention to certain correspondence which it had received from the Honorary Secretary of the Cape Western Sub-Group of the South African Society of Obstetricians and Gynaecologists. Having considered the correspondence, the Committee had resolved to recommend to Council that the correspondence be noted and that no further action be taken.

Council *Agreed* accordingly.

92. *Exemption from the Curfew Regulations – African Doctors.* At the request of the Natal Coastal Branch, the Committee had investigated this question and had agreed to report to Council that in its view the existing arrangements appeared to be satisfactory and did not necessitate any representations being made to the Government. The Branch had been informed that any African doctor could make application for exemption, and all such applications were received with sympathy. *Noted.*

93. *Income Tax Concessions in Connection with University Foundations.* It was reported that the Committee had considered a resolution from the Natal Coastal Branch, to the effect that the Government be requested to exempt donations to university foundations from income tax. Certain reasons for this request had been given. The Committee, however, had expressed the view that if representations were to be made to the Commissioner for Inland Revenue in connection with this matter, the representations should be made by university authorities and not by the medical profession. It had therefore resolved to recommend to Council that no action be taken in this matter.

Council *Agreed* accordingly.

94. *Letter from the South African Medical and Dental Council Regarding Misleading Medical Articles in the Public Press.* It was reported that, as a result of a letter it had received from the Medical Council, the Newspaper Press Union had requested the Association to invite its Branches and Divisions to advise the editors of the publications in their areas

of the names of persons nominated to scrutinize reports intended for publication. The Honorary Secretaries of all Branches had been informed of this request. *Noted.*

After discussion, it was proposed by Dr. Schneider, seconded by Dr. Spiro, 'That Council strongly recommends that all Branches, which have not done so up to the present, shall form Press Liaison Committees'. Council *Resolved* accordingly.

95. *Employment of* Locos Tenentes – *District Surgeons.* It was reported that the Committee had considered this question on representations from the Natal Coastal Branch. The matter had been taken up with the Union Department of Health, and the rates which applied to persons doing locums for District Surgeons had recently been increased.

Discussion followed, and it was proposed by Dr. Taylor 'That the rates of remuneration for *locos tenentes* for district surgeons are not in keeping with the standards laid down by the Medical Association'. When this was put to the vote, it was *Lost*.

The recommendation of the Committee, 'That the increased rates be accepted and that no further action be taken', was then put to the vote and was *Carried* with 2 dissentient votes.

96. *Appointment of Secretary for Health.* It was reported that on the instruction of the Acting Chairman of Council, the Secretary had approached the Minister of Health in regard to the appointment of a medical practitioner to the post of Secretary for Health, as it had been suggested in the lay press that it was possible that a lay person might be appointed to this posistion. The Committee had agreed to recommend to Council that it confirm the action taken by the Acting Chairman of Council and the Secretary. Council *Agreed* accordingly.

Council *Noted* that Dr. B. Maule Clark had since been appointed as Secretary for Health.

97. *Sight Screening.* It was reported that the Committee had considered a letter from the National Occupation Safety Association in regard to this matter, and had agreed to defer further consideration of the problem until the opinion and comments of the Ophthalmological Society had been obtained. The Committee had further agreed to recommend to Council that as the matter was urgent, it authorize its Executive Committee to finalize any recommendation which might be made by the Parliamentary Committee after it had considered the opinion and comments of the Ophthalmological Society at its next meeting.

Council *Agreed* accordingly.

98. *Health Conditions in Gaols in South Africa.* It was reported that the Committee had considered a memorandum dealing with conditions in gaols in South Africa which had been submitted by Dr. T. Schneider on behalf of the Southern Transvaal Branch. After consideration of the memorandum, the Committee had agreed to address a letter to the Director of Prisons (with a copy to the Secretary for Health) asking for certain assurances.

Discussion followed, and finally Council *Resolved* that the reply of the Director of Prisons be considered by the Parliamentary Committee, and that that Committee decide whether or not it would recommend that further action be taken by the Association in this regard.

Dr. Turton then moved the adoption of the Report of the Parliamentary Committee. This was *Carried*, and a vote of thanks was passed to the members of the Committee and to the Assistant Secretary for the work which had been done. Acclamation.

99. *Committee on Medical Insurance.* Dr. Lawrance pointed out that this Committee had served its purpose, and accordingly he proposed that it be discharged with thanks for the services which it had rendered. This was seconded by Dr. Alexander, and Council *Agreed* accordingly.

100. *Border Branch Newsletter.* The Chairman stated that the Executive Committee had considered the correspondence and reports which had appeared in the Annexures to the Agenda regarding statements which had been made in the Newsletter of the Border Branch, and had agreed to recommend to Council 'That the tone of the articles criticizing the actions of the Secretary and published in the Border Branch Newsletter be deplored'.

Mr. Baigrie moved accordingly, seconded by Dr. Deale.

It was proposed by Dr. Segall a d *Agreed* that Council go into committee.

After discussion Council *Resolved* to go out of committee and *Agreed* to *Confirm* in open meeting the resolution which had been carried in committee. The resolution so carried was that the recommendation of the Executive Committee be adopted.

101. *Workmen's Compensation Act Committee.* It was stated that this committee had nothing to report. *Noted.*

Council *Resolved* that the new Committee consist of Drs. Swanepoel, Meyer, Ochse, van Heyningen and de Villiers, and that Dr. Swanepoel be the Chairman of the Committee.

102. *Committee on Rehabilitation.* It was stated that this Committee had nothing to report. *Noted.*

Dr. Adler, who had been its Chairman, proposed that the Committee be discharged with thanks for the services which it had rendered. Council *Agreed* accordingly.

103. *Committee on Medical Education and Internships.* It was stated that this Committee had nothing to report. *Noted.*

Council *Agreed* that the Committee be discharged with thanks for its past services, on the understanding that, should it be necessary, it might be reappointed at a later date.

104. *Committee for Liaison with Dental Association of South Africa.* Dr. Schneider stated that he acted alone as the Association's liaison officer with the Dental Association of South Africa. He added that at this stage he had nothing to report. *Noted.*

Council *Agreed* that Dr. Schneider continue to act as its liaison officer.

105. *Committee for Liaison with Pharmaceutical Society of South Africa.* It was stated that this Committee had nothing to report. *Noted.*

Council *Agreed* that Dr. Turton, Mr. Mackenzie and Dr. Ochse act as the Committee for the ensuing triennium.

106. *Committee for Liaison with South African Nursing Association.* It was stated that this Committee had nothing to report. *Noted.*

Council noted that it had been the custom for the Council members resident in Pretoria to form this Committee.

Dr. Lawrance stated that in reality the Parliamentary Committee had done the work of this Liaison Committee.

As a result Council *Agreed* that the Parliamentary Committee undertake such work in liaison as might be necessary.

107. *Representation on Professional Provident Society of South Africa.* Dr. Penn said that he wished to resign from the Board of the Professional Provident Society as the Association's representative. He proposed that Dr. Frootko be appointed to take his place. Council *Agreed* accordingly.

108. *Medical Services Plan.* At this stage certain figures, which had been requested when this matter had been dealt with on the previous day under Minute 45 above, were made known to Council and were *Noted.*

CONSTITUTIONAL MATTERS

109. *Amendment of By-laws.* The Secretary stated that in terms of By-law 69, 4 By-laws were before Council for final confirmation of proposed amendments. They were as follows:

1. That By-law 7 (*e*) be deleted and replaced by a new By-law 7 (*e*) reading:

'*Affiliated student membership.* The Association of Medical Students of South Africa shall be deemed to be affiliated to the Association, and members of the student body who are registered as medical students by the South African Medical and Dental Council shall be deemed to be affiliated student members of the Association. They shall have such rights and privileges as may be allowed to them in the rules of the Branch of the Association in whose area their medical school is situated, but shall not have the right to vote in the affairs of the Branch. Such membership shall entitle them to receive the *South African Medical Journal* at a reduced rate'.

2. That By-law 9 (*d*) be amended to read:

'Affiliated student members may receive the *Journal*, the subscription for which shall be the only charge made to them'.

3. In By-law 27 delete the word 'Annual' in the second

line where it is applicable to the South African Medical Congress.

4. That By-law 55 be amended by the deletion of all words after 'Chairman', and that the following words be added:

'provided that any action taken by the Committee in terms of this By-law shall

'(i) be reported forthwith to all members of the Council,

'(ii) be included in the Agenda for consideration by the Council at its next Meeting.

'(iii) have the same validity as if dealt with by the Council until it shall have been confirmed or rejected at the next Meeting of the Council.'

These were put to the vote *seriatim*, and each was *Carried Nem. Con.*

110. *Cape Western Branch—Amendment of Constitution.* It was reported that the Cape Western Branch wished to include the words 'retiring Honorary Secretary' in Rules 11 (*a*) and 11 (*b*) of its Constitution. The Executive Committee had considered this matter and had agreed to recommend to Council that these amendments be approved. Council *Agreed* accordingly.

111. *Cape Midlands Branch—Amendment of Constitution.* It was reported that the Cape Midland Branch had adopted a new and up-to-date Constitution, a copy of which was submitted. The Executive Committee had agreed to recommend to Council that the Constitution of the Cape Midland Branch be approved. Council *Agreed* accordingly.

112. *Proposed New Division—Carletonville Division of Southern Transvaal Branch.* It was reported that members of the Association resident in the Fochville, Carletonville and Westonaria districts of the Southern Transvaal Branch had expressed the desire to become a separate Division of that Branch. A draft Constitution was submitted, and it was stated that the Executive Committee had agreed to recommend to Council that recognition be given to this new Division. Council *Agreed* accordingly.

113. *Dermatological Group—Amendment of Constitution.* It was reported that this Group had expressed the desire to be known in the future as the Dermatological Group of the Medical Association of South Africa, and to amend its Constitution accordingly. It was stated that the Executive Committee had agreed to recommend to Council that the necessary amendment be approved. Council *Agreed* accordingly.

114. *South African Paediatric Association—Amendment of Constitution.* It was reported that the Paediatricians' Group sought permission to amend its Constitution to provide for 9 instead of 8 members of its Executive Committee, and to increase its subscription. The Executive Committee had agreed to recommend to Council that the amendment of the Constitution of this Group be approved. Council *Agreed* accordingly.

115. *Radiological Society of South Africa—Amendment of Constitution.* It was reported that the Radiologists' Group sought permission to change its Constitution by the amendment of Rule 5 so that the word 'registered' would read in future 'qualified'. The Executive Committee had agreed to recommend to Council that this amendment be approved. Council *Agreed* accordingly.

116. *Compulsory Membership of the Association.* It was reported that a notice of motion had been received from the Border Branch, reading:

'(*a*) That the Border Branch is in favour of obtaining compulsory membership of the Medical Association of South Africa.

'(*b*) That the Branch inform other Branches of our views and ask for their support.

'(*c*) That Federal Council be instructed to consider ways and means of implementing the decision of the Association.'

As this was a subject which had received the attention of the Council and the Association on previous occasions, various memoranda on this subject had been circulated.

It was reported that the Executive Committee had agreed to recommend to Council 'That the proposal that membership of the Association be made compulsory be rejected'.

There was no discussion and Council *Adopted* the recommendation of the Executive Committee.

APPOINTMENTS OF REPRESENTATIVES

117. *British Commonwealth Medical Conference, 1961.* It was reported that a British Commonwealth Medical Conference was to be held in Auckland, New Zealand, in February 1961. It was stated that the Executive Committee had agreed to recommend to Council that Dr. Tonkin be the Association's representative at the Conference. Council *Agreed* accordingly.

118. *British Medical Association Annual Meeting, Torquay, 1960.* The attention of Council was directed to a report on this meeting which had appeared in the *Journal* of 8 October 1960 and which had been prepared by Dr. Wagner, the President of the Association, who had been the Association's representative on that occasion. *Noted.*

119. *British Medical Association Annual Meeting, 1961.* It was reported that the Annual Meeting of the British Medical Association for 1961 would be held conjointly with the British Medical Association of New Zealand in Auckland from 5 to 10 February 1961. The Association had been invited to appoint one delegate to attend the meeting as its official representative. The Executive Committee had agreed to recommend to Council that Dr. Tonkin be the Association's representative at this meeting. Council *Agreed* accordingly.

120. *Hospitality to British Medical Association Members.* Arising out of Minute 119 above, it was reported that the Executive Committee had agreed to recommend to Council that members of the British Medical Association who might travel to New Zealand by ships touching at Union ports should be entertained during their stay in port by members of local Branches. Council *Agreed* accordingly, and *Agreed* further that the British Medical Association be informed of this decision, as also the Branches of the Association which might be concerned.

121. *South African Medical Congress, Cape Town, 1961.* Dr. Landau presented a report on behalf of the Organizing Committee. He stated that the Committee requested Council to authorize them to hold only one Plenary Session if it was considered advisable to do so. He reminded Council that the rules at present laid down that at least two Plenary Sessions should be held, but he said that his Committee considered that it would be more useful to hold as many joint Sectional Meetings as possible.

Council *Agreed* that at the Cape Town Congress it would be permitted to hold only one Plenary Session if the Organizing Committee so desired.

Dr. Landau's announcement that Mr. Currie, the President-Elect of the Association, would be the President of Congress, was received with acclamation.

MISCELLANEOUS

122. *Committee on Trauma.* It was reported that the Southern Transvaal Branch had agreed to recommend to Council 'That a Committee on Trauma be appointed to consider all aspects of the problem of rendering adequate service to injured persons of all categories, with the object of making specific recommendations to the Government'.

Council *Adopted* the recommendation of the Southern Transvaal Branch and *Agreed* that the Council members representing the Southern Transvaal Branch form the Committee.

At the request of Dr. Agranat, Council *Agreed* that Mr. G. T. du Toit could be coopted to the Committee if the Committee so desired.

123. *Discrimination in Salary Scales Against Anaesthetists and Paediatricians.* A letter from the Honorary Secretary of the Anaesthetists' Group, dated 10 August 1960, was submitted, in which it was alleged that there was discrimination in the salaries paid to anaesthetists and paediatricians in teaching hospitals.

After short discussion Council *Agreed* that copies of the letter be referred to the Augmented Executive Committees in each of the Provinces, in order that any representations which might be necessary should be made.

124. *Medical Assistance to Cancer Sufferers.* A letter from

the National Secretary of the National Cancer Association of South Africa, dated 9 June 1960, was submitted.

The Secretary stated that this letter had been referred to the General Practitioner's Group for comment.

On behalf of the Group, Dr. Levy submitted a resolution reading: 'As it is traditional for the medical profession to treat patients *pro Deo* should the circumstances so warrant, the necessity for the establishment of a panel to render *pro Deo* services to cancer sufferers is deemed unnecessary'. The resolution was seconded by Dr. Paterson. Council *Agreed* accordingly.

125. *Treatment of Alcoholism.* A letter from the Chairman of the South African National Council on Alcoholism, dated 25 August 1960, was submitted.

Attention was drawn to the fact that this matter had been dealt with in Minute 70 above.

Council *Agreed* that the letter be *Noted*.

126. *Alcohol Content of Certain Patent Medicines.* A letter from the Organizing Secretary of the South African National Council for Child Welfare, dated 19 July 1960, was submitted.

After short discussion Council *Agreed* that the letter be referred to the Parliamentary Committee for such action as may be necessary.

127. *Loading of Doctors' Motor Car Insurance.* Correspondence from the Natal Coastal Branch and the Southern Transvaal Branch on this subject was submitted, as also a letter from the Manager of the Association's official insurers.

The Secretary explained the position and Council *Agreed* that the matter be referred to the Committee controlling the Association's Medical Insurance Agency.

The Chairman indicated that the Editor had expressed his willingness to publish in the *Journal* a warning to members that if a doctor used a car belonging to his wife, he should see that it was properly covered by insurance during the time of its use by him. *Noted*.

128. *Insurance Against Libel Actions.* Correspondence from the Southern Transvaal Branch and the Manager of the Association's offical insurers was submitted. It was indicated that it was not possible to obtain the form of insurance which had been suggested by the Southern Transvaal Branch.

It was reported that the Executive Committee had considered this matter and had agreed to recommend to Council that a sum of 2s. *per annum* be set aside from each member's annual subscription for the formation of a Contingency Fund.

The recommendation of the Executive Committee was put to the vote and was *Carried Nem. Con.*

129. *Western Transvaal Branch.* It was reported that an application had been received for the recognition of the Western Transvaal Branch which would be established in the area which had formerly been known as the Potchefstroom Division of the Southern Transvaal Branch. All the preliminaries had been concluded, and the Constitution of the proposed Branch had been scrutinized by the Executive Committee which had agreed to recommend to Council 'That recognition be granted to the Western Transvaal Branch as from 1 January 1961'. Council *Agreed Nem. Con.*, with acclamation.

130. *Soutpansberg Branch.* It was reported that an application had been received for recognition of the Soutpansberg Branch which would take in the area formerly known as the Pietersburg Division of the Northern Transvaal Branch. The Executive Committee had considered this matter and had scrutinized the Constitution, but as no formal consent had been received from the Northern Transvaal Branch the Executive Committee had agreed to recommend to Council 'That recognition be granted to the Soutpansberg Branch as from 1 January 1961, provided that the approval of the Northern Transvaal Branch is received in writing'.

Dr. Swanepoel, the President of the Northern Transvaal Branch, stated that his Branch had agreed to the separation of the Pietersburg Division to form the new Soutpansberg Branch. He moved that the proviso in the Executive Committee's recommendation be deleted. Council *Agreed* accordingly.

On being put to the vote, the recommendation of the Executive Committee, as amended, was *Carried Nem. Con.*, with acclamation.

131. *Requirement of Domicile in so far as Registration of Medical and Dental Practitioners is Concerned.* The Chairman outlined the procedure which would be adopted in regard to this matter, stating (1) that a copy of the letter dated 27 September 1960, received from the Registrar of the South African Medical and Dental Council, together with copies of the documents referred to in the letter, would be forwarded to the Honorary Secretaries of all Branches; (2) that all Branches would be requested to consider the matter and forward their views to the Parliamentary Committee; (3) that the Parliamentary Committee would be directed to correlate the views of the Branches and thereafter submit a recommendation concerning the view of the Association. Council *Agreed* accordingly.

132. *Reprinting of Tariff of Fees for Approved Medical Aid Societies.* Dr. Marchand drew attention to certain alterations which had been accepted by Council during the present Meeting, and indicated that as these had not been negotiated with representatives of medical aid societies, they could not be included in the Tariff Book which was to be reprinted. He indicated that these matters would be discussed at a joint meeting to be held during 1961 and, if agreed to, would be included in the amended Tariff Book which would be published later. Council *Agreed* accordingly.

133. *Notices of Motion for Next Meeting of Council.* Notices of motion for attention at the next Meeting of Council were read as follows:

1. Over the signatures of Mr. Baigrie and Mr. Currie:

'This Federal Council, being elected to foster the interests of the medical profession in South Africa as a whole, is of opinion that the concept of domicile should be removed from clauses of the Medical, Dental and Pharmacy Act which refer to the registration of medical practitioners by the South African Medical and Dental Council'.

2. Over the signatures of Dr. Zabow and Dr. Schneider:

'That the second resolution in Minute 18 of the record of the meeting of Federal Council held in March 1960 be reviewed and rescinded'.

3. Over the signatures of Dr. Troskie and Dr. van der Riet:

'Dat hierdie Federale Raad sy primêre doelstelling bespreek met die doel om die balans te herstel tussen die „bevordering van die geneeskunde en verwante wetenskappe en eer van die mediese beroep" aan die een kant, en „die bevordering van die finansiële belange van die beroep" aan die ander'.

4. Over the signatures of Dr. Troskie and Dr. Gilliland:

'Dat die vorige besluit van die Raad op die volgende vergadering heroorweeg en indien nodig geskrap word'. (Reference to this notice of motion is made in Minute 63 above.)

134. *Date and Place of Next Meeting of Council.* On behalf of the Southern Transvaal Branch, Dr. Penn extended an invitation for Council to meet in Johannesburg on the next occasion.

On the suggestion of Mr. Joubert, the Chairman accepted the invitation if there was to be a Meeting held in April 1961, and finally it was *Agreed* that the question of time and place of the next Meeting be left to the Executive Committee to decide.

135. *Thanks.* The Chairman expressed his thanks and the thanks of the meeting to the President and members of the Vaal River Branch and particularly to the ladies who had assisted with transport. He asked the President of the Branch to convey the Council's thanks to the Mayor for the Civic Luncheon which had been provided. He expressed thanks to the Council members for their cooperation in the conduct of the Meeting, and to the Secretaries and staff who had assisted. He mentioned also the Secretary of the Recreation Club in whose Hall the meeting had taken place, and expressed appreciation of the arrangements which had been made. Acclamation.

Mr. Mackenzie proposed a vote of thanks to the Chairman for his conduct of the Meeting, and also expressed appreciation of the work done by the Secretaries and staff. The vote of thanks was accorded with acclamation.

The meeting ended at 5.45 p.m.

OFFICIAL STATEMENT BY THE MINISTER OF HEALTH : AMPTELIKE VERKLARING DEUR DIE MINISTER VAN GESONDHEID

ORAL POLIOMYELITIS VACCINE

The Minister of Health wishes to make known that it has been decided that immunization with the attenuated live polio oral vaccine should temporarily cease until the arrival of the colder weather in May 1961, since it is not advisable to administer this vaccine during the hottest time of the year. During the hot months it is strongly recommended that the immunization should be continued with the Salk vaccine, with which the population is already conversant.

The Advisory Committee on Virology recommended that an immunization campaign be conducted in the early part of the summer in the larger local authority areas with Type I attenuated live polio oral vaccine in order to prevent an epidemic of poliomyelitis of this type during the latter half of the present summer, since Type I causes by far the most cases which occur during an epidemic.

Poliomyelitis can be caused by 3 different types of polio viruses, namely Types 1, 2 or 3. It is therefore necessary to immunize against all 3 types.

When Types 1, 2 and 3 polio vaccine are administered simultaneously, however, Types 2 and 3 may in some cases prevent Type I from taking and producing immunity. For this reason Type I has first been administered separately in order to render the immunization therewith effective. The second and third administrations of the attenuated live polio oral vaccine will consist of all 3 types.

The vaccine has been made available to local authorities which have full-time medical officers of health and the necessary facilities, i.e. the necessary facilities for storage of the vaccine at −20°C before it is administered and also the necessary facilities to organize a campaign and control it. The smaller local authorities could also obtain the vaccine although they do not have full-time medical officers of health, provided that in the opinion of chief regional health officers they possess the necessary facilities and could exercise satisfactory control over the campaign. It was also recommended by the Advisory Committee that after completion of this campaign with Type I vaccine the immunization should temporarily cease until the arrival of the colder weather, i.e. about May 1961.

There are several reasons why it is not advisable to administer the live polio vaccine during the hotter summer months. One of the reasons is that during very hot weather certain enteroviruses, apart from the poliovirus, are present among the population to a greater extent than during the winter months. The presence of these enteroviruses in the digestive tract of the human body is inclined to offset the development of the immunity which should be established by the attenuated live poliovirus vaccine. The percentage of persons who develop immunity after receiving the polio oral vaccine is accordingly lower during very hot weather than during the winter. The result of this would be that a false sense of security would exist in the case of persons receiving the vaccine but not becoming immune for the reasons indicated above. They would thus become the potential victims of the future — a most undersirable state of affairs.

In view of this and the fact that the hot weather has now arrived, it has been decided to suspend the campaign until the colder weather arrives in May 1961, before resuming it, probably on a larger scale.

This does not mean that immunization should now be suspended altogether; on the contrary, immunization should continue during the intervening 6 months with the well-known Salk vaccine.

It must be emphasized that the administration of the Salk Type vaccine which is done by injection and which is also efficacious, is not affected by the climate or weather conditions. It is therefore strongly recommended that immunization with this type of vaccine be continued in cases where persons have not yet had the oral vaccine or the full course of 4 injections of Salk vaccine.

POLIOMIËLITIS-SLUKENTSTOF

Die Minister van Gesondheid maak bekend dat besluit is om die immunisering met die verswakte lewende poliosentstof tydelik te staak totdat die kouer weer gedurende Mei 1961 intree, aangesien dit nie wenslik is om hierdie entstof tydens die warmste tyd van die jaar toe te dien nie. Gedurende die warm maande word dit sterk aanbeveel dat die immunisering met Salk-tipe entstof, waarmee die bevolking reeds vertroud is, voortgesit word.

Die Adviserende Komitee insake virologie het aanbeveel dat 'n immuniseringsveldtog in die gebiede van die grotere plaaslike owerhede met die verswakte lewende polio-slukentstof aan die begin van die najaar met Tipe I poliosentstof deurgevoer moet word om 'n epidemie van hierdie tipe poliomiëlitis gedurende die latere helfte van die huidige somer te voorkom, aangesien Tipe 1 verreweg die meeste van die gevalle wat tydens 'n epidemie voorkom, veroorsaak.

Poliomiëlitis kan deur drie verskillende tipes van poliovirusse veroorsaak word, nl. Tipe 1, Tipe 2 of Tipe 3. Gevolglik is dit nodig om die immunisering teen aldrie tipes te bewerkstellig.

Wanneer Tipes 1, 2 en 3 poliosentstof gelyktydig toegedien word, mag Tipes 2 en 3 verhinder dat Tipe 1 doeltreffend vat en immuniteit bewerkstellig. Om die rede is Tipe 1 eers afsonderlik toegedien om die immunisering daarmee doeltreffend te maak. Die tweede en derde toedienings met die verswakte lewende poliovirus-slukentstof sal uit aldrie tipes bestaan.

Die entstof is aan dié plaaslike owerhede wat oor voltydse mediese gesondheidsbeamptes en die nodige fasiliteite beskik, beskikbaar gestel, d.w.s. die nodige opbergingsfasiliteite vir die entstof by −20°C, voordat die entstof toegedien word, en ook die nodige fasiliteite om 'n veldtog te reël en te kontroleer. Ook die kleinere plaaslike owerhede wat nie oor voltydse mediese gesondheidsbeamptes beskik nie maar wat volgens die mening van die hoofstreeksgesondheidsbeamptes oor die nodige fasiliteite beskik en doeltreffende kontrole oor die veldtog kan uitoefen, kan die entstof bekom. Dit was ook deur die Adviserende Komitee aanbeveel dat na voltooiing van hierdie veldtog met Tipe 1 entstof die immunisering tydelik gestaak moet word totdat die kouer weer, d.w.s. ongeveer Mei 1961, intree.

Daar is verskeie redes waarom dit nie raadsaam is om die lewende poliosentstof gedurende die warmste somermaande toe te dien nie. Een van die redes is dat gedurende baie warm weer sekere enterovirusse, behalwe die poliovirus, in 'n groter mate onder die bevolking aanwesig is as wat die geval gedurende die wintermaande is. Die aanwesigheid van hierdie enterovirusse in die spysverteringskanaal van die mens is geneig om die ontwikkeling van die immuniteit wat deur die verswakte lewende poliovirusentstof bewerkstellig moet word, teen te werk. Gevolglik is die persentasie persone wat die immuniteit na toediening van die polio-slukentstof ontwikkel, geringer gedurende baie warm weer as wat die geval gedurende die winter is. Die gevolg hiervan sou wees dat by persone aan wie entstof toegedien is, maar wat om die rede hierbo aangedui nie immuun geword het nie, 'n valse indruk van veiligheid ontstaan. Hierdie persone word dan die potensiële slagoffers van latere polio aanvalle – wat in baie ongewenste toedrag van sake sou wees.

Met die oog hierop en die feit dat die weer nou werklik warm geword het, is dit besluit om die veldtog nou tydelik te staak en te wag totdat die kouer weer gedurende Mei 1961 intree voordat die immuniseringsveldtog, waarskynlik op 'n groter skaal, hervat sal word.

Dit beteken nie dat immunisering nou gestaak moet word nie. Dit beteken net dat die immunisering gedurende die volgende 6 maande met die ou bekende Salkentstof moet plaasvind.

Dit moet beklemtoon word dat die toediening van die Salk-tipe entstof wat deur inspuitings toegedien word, en wat ook baie doeltreffend is, nie deur die klimaat of weersomstandighede beïnvloed word nie. Dit word derhalwe sterk aanbeveel dat immunisering met daardie tipe entstof voortgesit word waar persone nog nie die slukentstof en ook nie die volle reeks van 4 inspuitings van die Salkentstof gehad het nie.

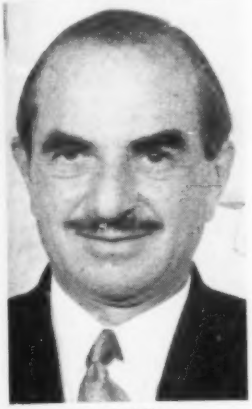
IN MEMORIAM

HARRY GOLDIN, L.D.S., R.C.S. (ENG.)

Dr. G. F. Dommisse, of Pretoria, writes:

Dr. Harry Goldin died suddenly on 1 December at his home in Waterkloof, Pretoria, after a brief illness. He was in his sixtieth year.

He obtained his degree in dentistry at the University of Michigan, Ann Arbor, in 1923 and returned to Pretoria in that same year to establish a dental practice.



Dr. Goldin

Ever a searcher after truth and knowledge, he felt compelled to return to his studies and in 1931 he obtained the degree of L.D.S., R.C.S. (Eng.).

His practice continued to thrive until the outbreak of World War II when he was one of the first to enlist in the services of the SAMC. He saw active service in Egypt, and then returned to the Union where he was attached to a specialized military maxillofacial unit. This proved to be a turning point in his career, and from this moment he pursued his subject with a unity and integrity of purpose which could not be denied.

He went from strength to strength, abandoning his general dental practice in 1951 when he registered with the South African Medical and Dental Council as a specialist in maxillofacial surgery. The future seemed uncertain, but Harry never wavered. He pioneered the unit for this specialized work within the walls of the University of Pretoria, and became the first incumbent of the post of Senior Specialist in Maxillofacial Surgery at the Oral and Dental Hospital, a post which he held until the time of his death.

In this capacity, he attained to a fulness of accomplishment and achievement which is denied to most, and today a thriving department in this important sub-division of surgery remains as a living memorial to his efforts.

What other facets were there to this many-sided humanitarian? He had a great love for his fellow human being, and his love was crystallized in his devotion to children in general, and his own immediate loved ones in particular.

His great interest in 'other people' was ever a source of wonderment to those who knew him well, and it came as no surprise when, at the testing time which befell him and his family during 1958, Harry emerged as one strengthened, and one from whom other sufferers could derive inspiration and comfort. This perhaps is his greatest epitaph, for when his faith came to be put to the acid test, it was not found wanting.

The deep sympathy of his colleagues is extended to Alice and their two surviving children, and to his family circle. Perhaps they wil be comforted in the knowledge that the wisdom which he so diligently sought has now been granted to him, for

'Where shall Wisdom be found?
And where is the place of Understanding?
Man knoweth not the price thereof;
Neither is it found in the land of the living.'

PASSING EVENTS : IN DIE VERBYGAAN

Dr. G. G. Harrison, of the Department of Anaesthesia, Groote Schuur Hospital, Cape Town, has been awarded the Nuffield Travelling Fellowship in Medicine for 1961. Dr. Harrison will leave for the UK, accompanied by his family, on 6 January 1961 and will spend the year attached to the Department of Anaesthetics, Hammersmith Hospital and Postgraduate Medical School of London.

Dr. G. G. Harrison, van die Departement van Anestesiologie, Groote Schuur-hospitaal, Kaapstad, het die Nuffield Reistoelaag in die Medisyne vir 1961 ontvang. Dr. Harrison, vergesel van sy gesin, sal op 6 Januarie na die V.K. vertrek en sal die jaar verbonde wees aan die Departement van Anestesiologie van die ‚Hammersmith Hospital and Postgraduate Medical School' van Londen.

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Dr. O. Haarburger, ophthalmologist, of Cape Town, has recently returned from a visit overseas. Dr. Haarburger visited the Barraquer Clinic in Barcelona and eye clinics in London, Essen, and Tel Aviv.

* * *

Mr. Lance Human, M.B., Ch.B. (Pret.), F.R.C.S. (Edin.), has recently returned to South Africa after 5 years of surgical training in London. He worked at the West London Hospital and Medical School and at the Hammersmith Hospital and Postgraduate Medical School where he received training in peripheral vascular surgery under Mr. Peter Martin. Mr. Human has now commenced practice as a specialist surgeon at 110 Park Drive, Port Elizabeth. Telephones: rooms 33733, residence 51-2968 (these numbers do not appear in the current Telephone Directory).

Dr. Lance Human, M.B., Ch.B. (Pret.), F.R.C.S. (Edin.) het onlangs na Suid-Afrika teruggekeer na 5 jaar chirurgiese opleiding in Londen. Hy het by die ‚West London Hospital and Medical School' en by die ‚Hammersmith Hospital and Postgraduate Medical School' gewerk waar hy spesiale opleiding in perifere bloedvat-chirurgie ontvang het onder dr. Peter Martin. Dr. Human het nou as spesialis-chirurg begin praktiseer te Parkrylaan 110, Port Elizabeth. Telefone: spreekkamer 33733, woning 51-2968 (hierdie nommers verskyn nie in die jongste Telefoongids nie).

* * *

Dr. W. M. Thurlbeck, M.B., Ch.B. (Cape Town), has been awarded the Paul Dudley White Fellowship in Cardiology by the Massachusetts Heart Association. Dr. Thurlbeck is studying pathological aspects of emphysema.

Dr. W. M. Thurlbeck, M.B., Ch.B. (Kaapstad) het die Paul Dudley White Toekenning vir Kardiologie ontvang van die Massachusettse Hartvereniging. Dr. Thurlbeck bestudeer patologiese aspekte van empfiseem.

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Dr. L. H. Opie, M.B., Ch.B. (Cape Town) has been awarded the Samuel A. Levine Fellowship in Cardiology by the Massachusetts Heart Association. Dr. Opie is studying the metabolism of heart muscle.

Dr. L. H. Opie, M.B., Ch.B. (Kaapstad) het die Samuel A. Levine Toekenning vir Kardiologie ontvang van die Massachusettse Hartvereniging. Dr. Opie bestudeer die metabolisme van die hartspier.

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Approved Medical Aid Societies – Correction. Due to a typographical error, the address of the Pretoria Portland Cement Co. Ltd. No. 1 Works, was omitted from the list of Approved Medical Societies published on page 1063 of the issue of the *Journal* for 10 December. This entry should read: '95. Pretoria Portland Cement Co. Ltd. No. 1 Works (Hercules) Medical Aid Society, P.O. Box 405, Pretoria.'

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Hart-long Groep, Universiteit van Stellenbosch. Die sluitingsvergadering van hierdie jaar is gehou op 1 Desember 1960. By hierdie geleentheid is 'n konstitusie goedgekeur en 'n nuwe bestuur vir 1961 verkies bestaande uit dr. B. J. van R. Dreyer (Voorsitter), dr. H. P. Wassermann (Sekretaris) en dr. L.

Potgieter (Tesourier). Daar is ook besluit om aansoek te doen by die Suidelike Afrikaanse Hartvereniging om lidmaatskap as 'n onafhanklike subseksie.

Na die besigheidsbespreking is 'n geval met kriptokokkus infeksie van die long voorgedra deur dr. P. E. S. Loubser. Aan die hand van dié geval is die kliniese beeld, diagnose, en prognose breedvoerig bespreek en die ondervinding met behandeling met Amphotericin B is toegelig.

Die volgende vergadering is bepaal vir begin Februarie 1961.

* * *

Cape Western Branch (M.A.S.A.). A special Branch meeting was held on 9 December 1960 at which Mr. P. J. Parvus, General Manager of the Medical Services Plan explained the working of the Plan to members, and answered questions. A resolution was passed which read: 'That this Branch recommends that the Executive Committee of Federal Council give immediate and prompt support to the extension of the operation of the Medical Services Plan'.

* * *

South African Institute for Medical Research, Johannesburg. Annual General Meeting. The Annual General Meeting of the Institute will be held on Monday 9 January 1961 at 5.10 p.m. in the Institute Lecture Theatre.

Agenda

1. Chairman's report
2. Election of committee
3. Any other business
4. Address by Dr. W. M. Politzer on 'Diabetes mellitus in several Bantu communities'.

THE BENEVOLENT FUND : DIE LIEFDADIGHEIDSFONDS

Met dank word die volgende skenkings gedurende die maand November 1960 erken:

The following donations during November 1960 are gratefully acknowledged:

Geloftekaarte ter Nagedagtenis aan : Votive Cards in memory of:

Mrs. E. M. Steyn *by* Dr. A. W. Sichel; Dr. A. Watt *by* Drs. A. L. Agranat, James Black, W. A. Dodds, and A. J. S. Boyd; Dr. W. T. Skaife *by* Natal Inland Branch (M.A.S.A.); Dr. L. Mirvish *by* Drs. A. W. Sichel and D. P. Marais; Dr. Drury Shaw *by* Dr. A. J. S. Boyd; Mr. A. Laubscher *by* Dr. A. J. S. Boyd; Dr. W. G. Grant *by* Dr. and Mrs. A. Smith; Dr. J. R. Eidelman *by* Dr. A. L. Agranat; and Mrs. Wiehahn *by* Prof. J. G. A. Davel.

Total Received from Votive Cards: £21 15s. 0d.
Totaal Ontvang van Geloftekaarte:

Dienste Gelewer aan : Services Rendered to:

Dr. L. M. Marchand en familie *deur* Verskeie kollegas.

Dr. C. Riekert and family *by* Drs. N. A. Rossiter, L. Mundy, J. M. Fadyen, D. F. Standing, G. Drummond, J. D. Taylor, and Dr. T. Edmunds.

Mrs. E. Sieff and Leslie Sieff *by* Dr. L. E. Lane.

Mrs. M. Taylor *by* Dr. A. Landau.

Total Received from Services Rendered: £132 16s. 0d.
Totaal Ontvang van Dienste Gelewer:

Donasies : Donations:

	£	s.	d.
Drs. H. C. Enslin, I. E. Meyer, F. C. Friedlander, S. J. Adendorff *Totaal : Total:*	2	2	0
Cape Western Branch (M.A.S.A.)—collection box	2	19	2
Drs. Harries, Kuschke and Hofmeyr	1	1	0
Anoniem—Agentskap dienste		5	0
Overberg Division (M.A.S.A.) *per* Dr. S. Stein	3	3	0
Dr. Y. Kuper	5	5	0
Mr. and Mrs. J. Wolfowitz on the occasion of the silver wedding of Dr. and Mrs. A. Rabinowitz	3	3	0
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Until such time as Medical Services Plan becomes Union-wide in operation, doctors outside of the pilot area may be considered as Participating Doctors, thereby obtaining the benefits of direct payment of accounts on a Participating Doctor's basis and accepting the responsibilities of Participating Doctors, by following this procedure:

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P. J. Parvus
General Manager

Medical Services Plan
P.O. Box 10314
Johannesburg
15 December 1960

SOUTH AFRICAN MEDICAL JOURNAL

ORGAN OF THE MEDICAL ASSOCIATION OF SOUTH AFRICA

In hierdie uitgawe
In this issue

International Medicine and the Medical Profession

Moonflower Poisoning

Editorial : Van die Redaksie
Retrospect and Prospect
By die Wisseling van die Jaar

Space Medicine

Minutes of Meeting of Federal Council (cont'd)

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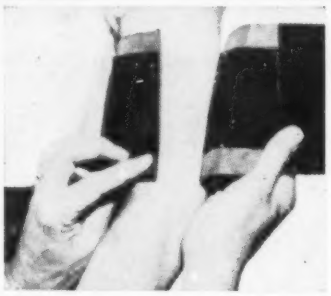

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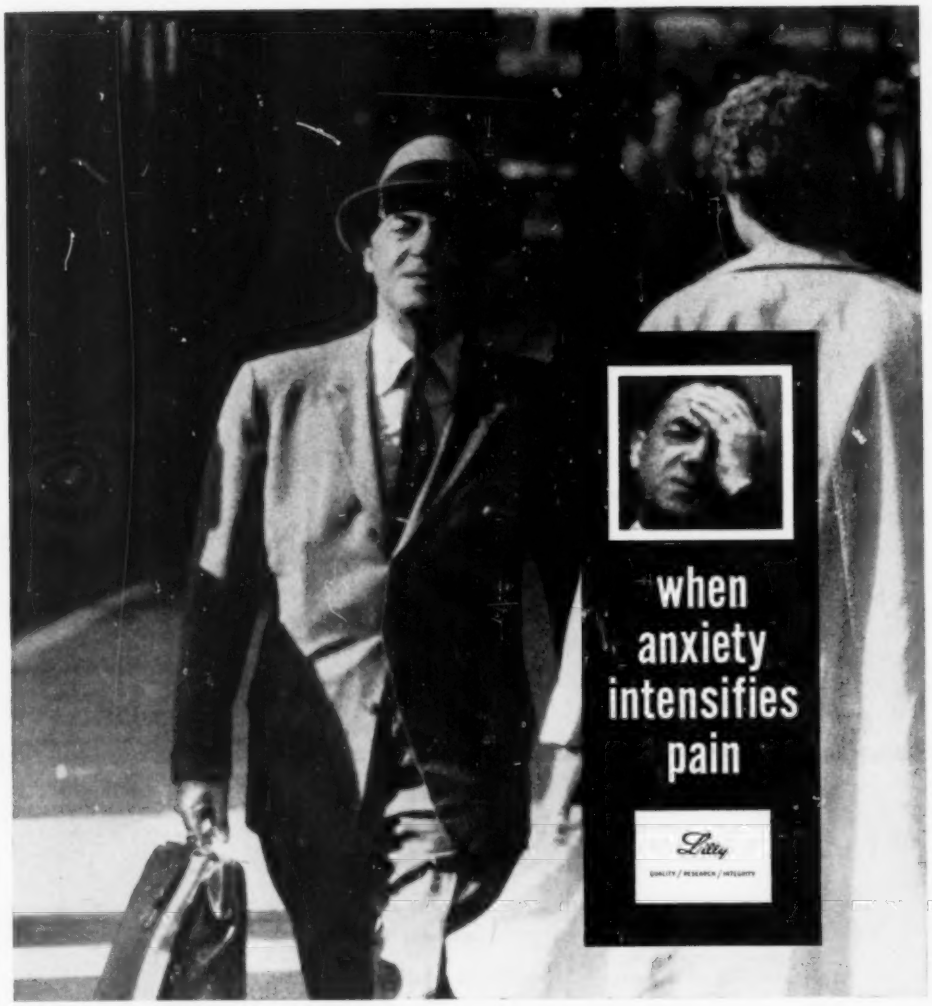

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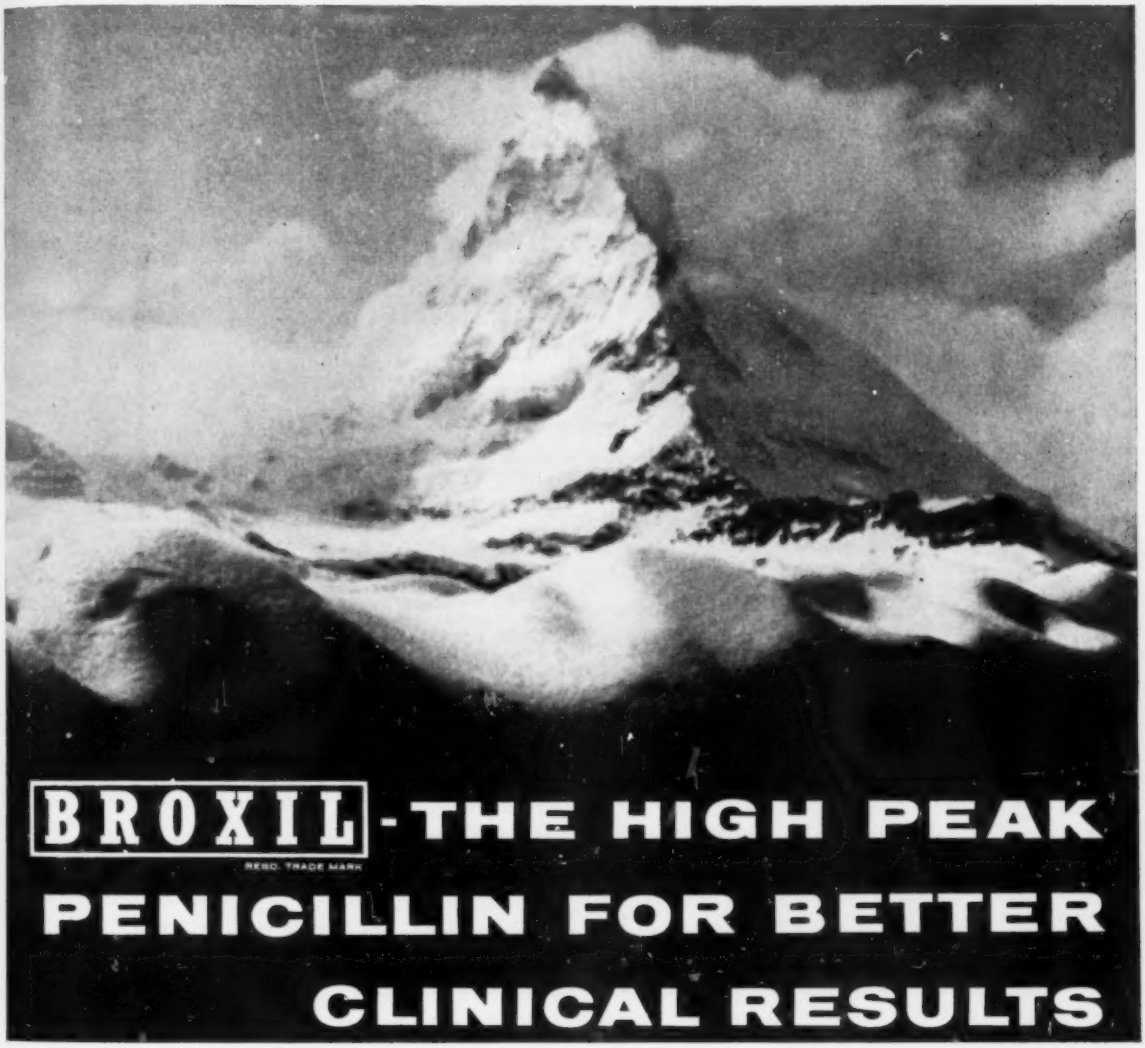

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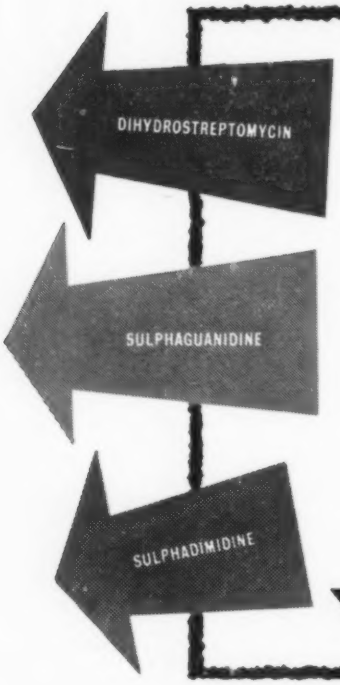

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1. Bateman, F. J. A., B.M.J. (1956) **1**, 554; and *Nursing Mirror* (1956) **104**, 483.
2. Roberts, G. W., *Lancet* (1957) **1**, 1094; and *Nursing Times* (1957) Oct. 25, pp. 1906/7.
3. Sharp, J. L. H., *B.M.J.* (1956) **1**, 1169.

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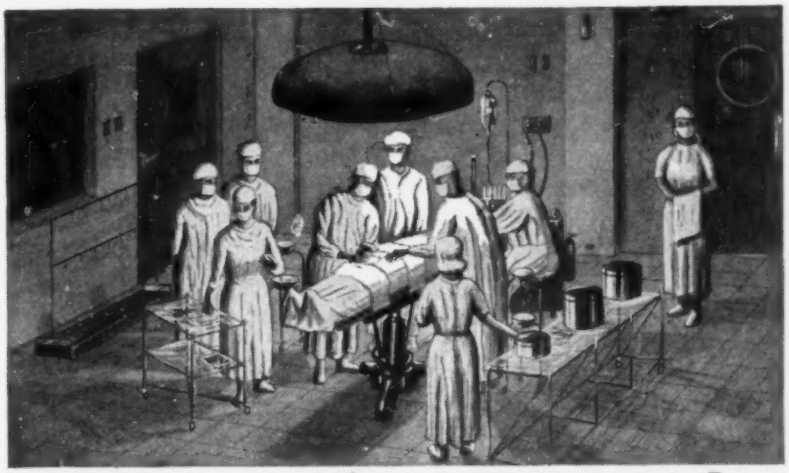

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(3707) (3636) (3604) VERSKEIE KAROO-PRAKTYKE. HOSPITAALDORPE. D.S.-AANSTELLINGS. Medisyne word aangemaak soms vorgeskryf. SOMMIGE GEEN OPPOSISIE NIE. Kontantontvangste oorskry £4,000 per jaar. *Premie vir praktyk, voorraad, medisyne en instrumente slegs* £750 *en in sommige gevalle selfs minder en dit kan in maandelikse paaiemente oor lang tydperk afbetaal word. Sommige gevalle geen kontantdeposito nie.* UITSTEKENDE WONINGS EN TOEGERUSTE SPREEKKAMERS TE HUUR TEEN LAE HUURGELD OF TE KOOP.

ROOMS TO LET : CAPE TOWN

(3487) In centre of city. Own consulting room and share receptionist and waiting room. RENTAL ONLY £10 P.M.

MEDICAL INSTRUMENTS FOR SALE
Suitable for General Practice

(3515) (3584) (3697) 2 Couches, baby scale (metric), anaesthetic apparatus for midwifery, Midwifery bag, midwifery forceps, Spencer Wells Forceps, Tonsillectomy Sets, etc. *Nominal prices only.* Excellent condition. Can be viewed at Medical House, 35 Wale Street, Cape Town.

AGENTSKAP-AFDELING : AGENCY DEPARTMENT
JOHANNESBURG

Mediese Huis, Esselenstraat, 5. Telefoon: 44-0817
Medical House, 5 Esselen Street. Telephone: 44-0817
T.A. "Serpent"

PRACTICES, PARTNERSHIPS AND ASSISTANTSHIPS
PRAKTYKE, VENNOOTSKAPPE EN ASSISTENTSKAPPE

(Pr-S577) *OOS-TRANSVAALSE HOSPITAALDORP.* DERDE AANDEEL word aangebied in ou-gevestigde algemene praktyk. Alleen iemand wat chirurgie kan doen word verlang en ruimskootse voorsiening vir sodanige ondervinding is gemaak in die premie van £750.

(Pr-S572) Very, very sound practice for sale in a HOSPITAL TOWN in *SOUTH WEST AFRICA.* The absolute minimum *net* income is £4,500 per annum. Premium for this lucrative practice is £3,000 and easy terms are available; discount for cash. Full details on application.

(Pr-S576) *LARGE REEF HOSPITAL TOWN.* HALF SHARE is for sale in general practice with plenty of major surgery. Will suit an English speaking person with a good knowledge of Anaesthetics. Annual turnover exceeds £8,000 p.a. and practice offers wonderful scope for expansion. Premium is £2,400 and terms are available.

(Pr-S551) *VRYSTAATSE HOSPITAALDORP.* Een van die vennote van 'n driemanspraktyk wil sy aandeel verkoop. Premie is £3,000 en maklike voorwaardes vir afbetaling kan gereël word. Die netto inkomste van die aandeel is £4,000 p.j. werd. Voornemende koper kan ook 'n plaasvervanging van 'n paar maande doen teen £6 6s. 0d. per dag, plus alles vry, alvorens hy besluit.

(1812) *NORTHERN RHODESIA.* Locum is required as from 21 APRIL 1961 to 14 JANUARY 1962, both dates inclusive. Salary at a flat rate of £200 p.m. and will run from the date the locum leaves Johannesburg to take up employment until his return. Free furnished accommodation provided, but board will be for locum's own account. First class rail fare.

(1811) *O.F.S. HOSPITAL TOWN.* ASSISTANTSHIP is offered in large general practice with surgery. Excellent hospital and specialist facilities. To commence duties as soon as possible. Attractive salary offered. DEFINITE VIEW TO PARTNERSHIP.

(1810) *VRYSTAATSE PRAKTYK.* ASSISTENTSKAP word aangebied in winsgewende algemene praktyk met D.G. aanstelling. VENNOOTSKAP sal aangebied word na proefperiode van 3 tot 6 maande. Aantreklike aanvangsalaris sal betaal word en die pos is veral geskik vir 'n getroude man.

(1808) *JOHANNESBURG.* THIRD PARTNER is required for a partnership practice of long standing and will suit a Jewish doctor with a higher degree in Surgery or Gynaecology.

(1809) *JOHANESBURG AREA.* ASSISTANT WANTED WITH DEFINITE VIEW TO PARTNERSHIP IN LARGE NON-EUROPEAN PRACTICE. FINE OPPORTUNITY FOR THE RIGHT MAN. TO COMMENCE DUTIES TOWARDS END JANUARY, 1961.

SPECIALIST PRACTICE

PAEDIATRICIAN available as assistant with view to partnership, preferably in Pretoria or the Rand.

PATOLOOG in Johannesburg benodig 'n vennoot of assistent met oog op vennootskap.

PARTNERSHIP is offered in *GYNAECOLOGICAL* practice of long standing, in Johannesburg.

PHYSICIAN required for a Johannesburg practice.

Partnership offered in ANAESTHETIST practice.

ROOMS TO LET

JOHANNESBURG. Suite of three rooms: Waiting, Consulting, Examining. Rental £27 p.m. inclusive of water and lights. Tel.: 22-6183.

FOR SALE

General Electric 100 M.A. X-Ray unit, completely shockproof, consisting of control table, transformer, tilting combination, bucky and screening table, cables, X-Ray tube and screen. Price reasonable.

FOR SALE

DOCTOR'S HOUSE AND LARGE MIXED PRACTICE IN CAPE TOWN SUBURB. LARGE BOND ON HOUSE AVAILABLE AND EASIEST OF TERMS FOR PAYMENT OF BALANCE. WRITE A.V.Z. P.O. BOX 643, CAPE TOWN.

EMMAUS MISSION HOSPITAL (Lutheran)

near Cathedral Peak Area, Natal.

LOCUM tenens needed February to May 1961. Correspondence requested. P. O. Box 6, Winterton, Natal.

IMPORTANT NOTICE

The Federal Council wishes all medical practitioners, who intend applying for contract practice appointments advertised in these columns to consult the Honorary Secretary of the Branch of the Medical Association of South Africa in whose area such an appointment falls in order that they may know whether the terms of the appointment are satisfactory. Contract practice appointments include all those made to the Medical Benefit Societies, Sick Funds and Factories. The addresses of the Honorary Secretaries of Branches are as follows:—

Border: Dr. P. J. Schnell, P.O. Box 405, East London.
Cape Eastern: Dr. L. R. L. Solomon, 133 High Street, Grahamstown.
Cape Midland: Dr. P. Jabkovitz, 1, Glenairlie, 69 Cape Road, Port Elizabeth.
Cape Western: Dr. J. Munro Gold, P.O. Box 643, Cape Town.
Eastern Transvaal: Dr. K. A. Gough, P.O. Box 536, Benoni.
Griqualand West: Dr. J. D. Visser, P.O. Box 445, Kimberley.
Natal Coastal: Dr. D. Martyn, 53 Medical Centre, Field Street, Durban.
Natal Inland: Dr. D. F. Symonds, P.O. Box 285, Pietermaritzburg.
Northern Transvaal: Dr. F. A. K. van Wyk, 15 Administrative Bldg, General Hospital, Pretoria.
O.F.S. Goldfields: Dr. N. K. Cath, P.O. Box 711, Welkom.
O.F.S. and Basutoland: Dr. C. V. v. d. Merwe, P.O. Box 834, Bloemfontein.
Southern Tranvaal: Dr. J. I. H. Frootko, P.O. Box 10102, Johannesburg.
South West Africa: Dr. N. Jacobson, P.O. Box 1789, Windhoek.
Soutpansberg: Dr. I. S. Steyn, c/o Private Bag 1316, Pietersburg, Tvl.
Transkei: Dr. J. H. Hofmeyr, P.O. Box 318, Umtata.
Vereeniging.
Vaal River: Dr. C. J. van Heyningen, P.O. Box 742, Vereeniging.
Western Transvaal: Dr. H. S. Shak, P.O. Box 74, Klerksdorp, Tvl.

AUSTRALIA

RADIOLOGICAL PRACTICE FOR SALE PRACTICE NO. 171

Radiological, diagnostic, private practice in attractive country city in New South Wales, unopposed serving population of about 50,000 and enjoying support of 40 to 50 doctors in the area excellent hospital facilities, average gross income £A9,600. Practice includes major X-ray Plant in suite of professional rooms in centre of city. Price goodwill X-ray plant, furniture and furnishings for cash £A9,500 or on terms £A10,000. Deposit £A5,000 balance plus interest at 6½% per annum repayable over 5 years.

Further details provided to bona fide enquirers only.

Apply Waltor Proctor Limited, Medical Agents 9-13 Bligh Street, Sydney, N.S.W. Australia.

FOR SALE

NATIVE PRACTICE (WITH ONE APPOINTMENT) NATAL INLAND CASH INCOME £6,000 P.A. EASY TERMS. DETAILS ON REQUEST. WRITE A.V.T. P.O. BOX 643, CAPE TOWN.

ASSISTANTSHIP AND PARTNERSHIP

ASSISTANT URGENTLY REQUIRED. SALARY £200 MONTHLY. DEFINITE VIEW PARTNERSHIP IN 2-3 MONTHS. INCOME £12,000. PREFERABLY AFRIKAANS SPEAKING. WRITE A.V.Q., P.O. BOX 643, CAPE TOWN.

PUBLIC SERVICE OF SOUTH AUSTRALIA

Applications for the position set out hereunder will be received by: The Administrator, Royal Adelaide Hospital, North Terrace, Adelaide, South Australia, until and including 30th January, 1961.

Applicants should state full names, address, date of birth, marital status, academic qualifications, practical experience and give particulars of war service (if any). Copies only of testimonials should be submitted with the application.

Hospitals Department

SENIOR STAFF RADIOLOGIST, RADIOLOGICAL DEPARTMENT, ROYAL ADELAIDE HOSPITAL

The Royal Adelaide Hospital is the largest general teaching hospital in South Australia, with a present capacity of approximately 1,200 beds (comprising 700 beds in the main hospital which is situated on the perimeter of the city proper, and the remainder long-term and infectious patients in suburban annexes). A major re-building programme has recently been commenced.

SALARY: £A.3,525 (approximately £SA.2,805) per annum.

DUTIES: Responsible to the Medical Superintendent for:

(1) the organization, direction and provision of the Diagnostic Radiological Services of the Royal Adelaide Hospital in conjunction with the Honorary Radiologist;
(2) the allocation of screening, reporting and special examination sessions to Honorary radiological staff in conjunction with the Honorary Radiologist;
(3) the direction and control of all paid medical and technical staff employed in the Radiological Department in a full-time or part-time capacity;
(4) the teaching and training of the full-time medical staff of the Radiological Department.

QUALIFICATIONS:

Applicants must be legally qualified medical practitioners with a higher qualification in Medical Radiology (preferably F.F.R. or equivalent). A higher qualification in general medicine or surgery would be an advantage.

The position is full-time without the right of private practice.

TE KOOP

ONOPPONEERDE PRAKTYK IN NOORDKAAPLAND ONTVANGSTE £400 - £500 PER MAAND MINIMUM NAGWERK. D.G. AANSTELLING. PREMIE £1,400 WAT MEDISYNE VOORRAAD INSTRUMENTE EN SPREEKKAMER MEUBELS INSLUIT. TERME KAN GEREEL WORD. SKRYF AAN A.W.F. POSBUS 643, KAAPSTAD

PROVINCIAL ADMINISTRATION OF THE CAPE OF GOOD HOPE

HOSPITALS DEPARTMENT

VACANCY: MEDICAL OFFICER GRADE III: SANDFLATS HEALTH CENTRE

Applications are invited for the post of Resident Doctor to the Sandflats Health Centre which is situated 54 Miles from from Port Elizabeth — 47 Miles from Grahamstown on the National Road and Main Railway line.

The salary attaching to the post is as follows:—

No Experience: £1,380 per annum.
1 Year's Experience: £1,440 per annum.
2 or more year's experience: £1,740 per annum.

In addition a country house with garden is available at a nominal rental.

The Hours of duty are 8.30 a.m. to 4.30 p.m.

Applications should be submitted on the prescribed form, which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital in the Cape Province and must be addressed to the President, Red Cross Society, P.O. Box 10, Sandflats. Closing date for the receipt of applications is 26th January, 1961.

N 40921

RADIOLOGICAL VACANCY

RADIOLOGIST WITH DIAGNOSTIC AND/OR THERAPY QUALIFICATIONS REQUIRED WITH VIEW TO PARTNERSHIP IN A CONSULTING PRACTICE WITH VARIOUS APPOINTMENTS. APPLY DRS. LOOTS, OSLER & HURWITZ, P.O. BOX 1756, JOHANNESBURG.

OPENINGS — JULY 1, 1960 OR PROXIMATE

For Pathologists interested in Hematology and/or Blood Banking and/or Bacteriology.

Men with Specialist Registration and 1 or more years of experience preferred, for Faculty Appointments in Ohio State University.

700-bed teaching hospital, graduating 140 medical students per year, expansion certain in near future. Research facilities available.

For further information write to: Dr. E. von Haam, Chairman, or Dr. C. R. Macpherson, Vice-Chairman Department of Pathology Ohio State University, 410 West 10th Avenue, Columbus 10, Ohio, U.S.A.

UNIEGESONDHEIDSDEPARTEMENT
VAKATURES: MEDIESE POSTE

1. Aansoeke om aanstelling in die vakatures hieronder genoem, word van geskikte kandidate ingewag.

2. Aansoeke (in tweevoud) op vorms Z.83 en Sdk.8(a) wat van alle landdroskantore of van die Sekretaris van Gesondheid verkrygbaar is, asook 'n volledige uiteensetting van vorige ondervinding moet aan die Sekretaris van Gesondheid, Posbus 386, Pretoria, gerig word en moet hom voor of op 14 Januarie 1961 bereik. Afsonderlike aansoeke moet ten opsigte van elke pos waarvoor aansoek gedoen word, ingedien word.

3. *Vakatures:*
   (i) Spesiale Graad Staatsmediese Beampte (Distriksgeneesheer) (£2,600 per jaar vas) – Pretoria.
   (ii) Geneesheer-bestuurder, Graad III (£2,250 per jaar vas) – Komani-hospitaal, Queenstown).
   (iii) Staatsmediese Beampte (Patologie) (£1,560 x 60 — 2,100) Patologiese Laboratorium, Durban.

4. *Vereistes:*
   (i) Registrasie as geneesheer by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad, en
   (ii) die volgende addisionele kwalifikasies/ondervinding vir aanstelling tot die pos van:—
      (a) *Spesiale Staatsmediese Beampte (D/G).* 'n Hoër akademiese kwalifikasie in die betrokke rigting of toepaslike ervaring.
      (b) *Geneesheer-bestuurder, Graad III.* Meer as agt jaar ondervinding na registrasie asook ondervinding in die behandeling van sielsieke pasiënte.

5. *Basis van erkenning van vorige ondervinding:*
Ter erkenning van vorige ondervinding sal 'n aanvangsalaris op die volgende grondslag aan 'n Staatsmediese Beampte £1,560 x 60 — 2,100) by aanstelling toegeken word:—

By aanstelling binne 'n jaar na registrasie	£1,560
Vir een volle jaar ondervinding	£1,620
„ twee „ „ „	£1,740
„ drie „ „ „	£1,800
„ vier „ „ „	£1,860
„ vyf „ „ „	£1,920
„ ses „ „ „	£1,980
„ sewe „ „ „	£2,040
„ agt „ „ „ en meer	£2,100

6. *Algemeen:*
Inligting betreffende diensvoorwaardes, voorregte ens., is van die Sekretaris van Gesondheid verkrygbaar.

Aanstellings sal ooreenkomstig die bepalings van die Staatsdienswet (Wet nr. 54 van 1957) geskied.

O 6685

VACANCIES

1. *MEDICAL INSPECTOR OF SCHOOLS* — £1,560 x 60 — 2,100 *(Man or Woman).*
(Durban or Pietermaritzburg.)

Requirements: Registration with the South African Medical and Dental Council as a medical practitioner.

Higher commencing salaries are granted on the following basis in respect of appropriate post-registration experience:—

Completed years of experience.	*Salary in £ per annum.*
1	1,620
2	1,740
3	1,800
4	1,860
5	1,920
6	1,980
7	2,040
8 and more	2,100

Applications to the Provincial Secretary, Pietermaritzburg.

2. *GOVERNMENT MEDICAL OFFICER* — £1,560 x 60 — 2,100 *(Man or Woman).*
(Pretoria.)

Requirements: Registration with the South African Medical and Dental Council as a medical practitioner.

Higher commencing salaries are granted on the same basis as in the case of post no. 1, above, in respect of appropriate post registration experience.

Applications to the Secretary for Labour, Pretoria.

Applications must be made on forms Z.83 and P.S.C.8(a) which are obtainable from the nearest magistrate's office or from the addresses indicated. The completed applications as well as enquiries must be directed to the addresses indicated. Original testimonials and certificates should not be submitted. The closing date for the receipt of applications is the 7th January, 1961

O 6682

PROVINCIAL ADMINISTRATION OF THE CAPE OF GOOD HOPE
HOSPITALS DEPARTMENT
HOSPITAL SERVICE: VACANCIES

1. Applications are invited for the following vacant posts:—

Post and Salary	*Institution*	*Qualifications*
Medical Officer, Grade III. No experience, £1,380 p.a. 1 years' experience, £1,440 p.a. 2 and more years' experience, £1,740 p.a.	Provincial Hospital, Uitenhage.	Registration as Medical Practitioner.

Board and quarters (married and single) are available at the following rates:

Single Medical Practitioner	£13	6	8	per month
Married Medical Practitioner	£13	6	8	„ „
Wife	£12	6	8	„ „
Child 10 years and over	£12	6	8	„ „
Child under 10 years	£6	3	4	„ „

2. The conditions of service are prescribed in terms of Hospital Service Ordinance No. 23 of 1958, and the regulations framed thereunder.

3. In addition to the salary indicated, a vacation savings bonus is payable, subject to certain conditions.

4. Successful candidates for permanent appointment, if not already in the hospital service, will be required to submit satisfactory birth, health, professional and registration certificates.

5. Applications must be made on the prescribed staff 23 form which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any provincial hospital in the Cape Province.

6. Applications must be addressed to the Medical Superintendent and must reach him not later than 19th January, 1961.

N 409215

PARTNERSHIP AVAILABLE

PARTNERSHIP AVAILABLE IN A LARGE AND WELL ESTABLISHED PRACTICE IN DURBAN NATAL, TO REPLACE ONE DOCTOR IN A FIRM OF FOUR PARTNERS. PREFERENCE WILL BE GIVEN TO SOMEONE CAPABLE OF DOING SURGERY. SPECIAL SURGICAL QUALIFICATIONS A RECOMMENDATION A.W.K. P.O. BOX 643 CAPE TOWN.

FOR DISPOSAL

WELL-ESTABLISHED EAR NOSE AND THROAT PRACTICE, MAIN CENTRE, CENTRAL AFRICAN FEDERATION. GENUINE ENQUIRIES ONLY TO A.W.B., P.O. BOX 643, CAPE TOWN.

DRIE GENEESHERE DRINGEND NODIG

Die N.G. Sending van die O.V.S. het drie geneeshere dringend nodig. Een vir die Sendinghospitaal te Witzieshoek en twee vir die sendinghospitale te Nyanje en Kamoto in Noord Rhodesië.

Skrywe vir besonderhede aan: Ds. D. S. Snyman, Posbus 1399, BLOEMFONTEIN. Foon: 3388.

VAKATURES

1. *MEDIESE INSPEKTEUR VAN SKOLE* — £1,560 x 60 — 2,100 *(Man of Vrou).*

(Durban of Pietermaritzburg.)

Vereistes: Registrasie as geneesheer by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad.

Hoër aanvangsalarisse word op die volgende grondslag toegeken ten opsigte van toepaslike ondervinding wat na registrasie opgedoen is:—

Volle jare ondervinding.	*Salaris in £ per jaar.*
1	1,620
2	1,740
3	1,800
4	1,860
5	1,920
6	1,980
7	2,040
8 en meer	2,100

Aansoeke aan die Provinsiale Sekretaris, Pietermaritzburg.

2. *STAATSMEDIESE BEAMPTE* — £1,560 x 60 — 2,100 *(Man of Vrou).*

(Pretoria.)

Vereistes: Registrasie as geneesheer by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad.

Hoër aanvangsalarisse word op dieselfde grondslag soos in die geval van pos no. 1, hierbo toegeken ten opsigte van toepaslike ondervinding wat na registrasie opgedoen is.

Aansoeke aan die Sekretaris van Arbeid, Pretoria.

Aansoek moet gedoen word op vorms Z.83 en Sdk.8(a) wat van die naaste Landdroskantoor of die aangewese adresse verkrygbaar is. Die voltooide aansoeke asook navrae moet gerig word aan die adresse aangedui. Oorspronklike getuigskrifte en sertifikate moet nie ingedien word nie. Die sluitingsdatum vr die ontvangs van aansoeke is 7 Januarie 1961.

O 6682

DEPARTEMENT VAN HOSPITAALDIENSTE (TRANSVAAL)

VAKATURES: TRANSVAALSE PROVINSIALE HOSPITALE

Aansoeke word ingewag van geskikte kandidate vir die ondervermelde poste by Provinsiale Hospitale in Transvaal.

Aansoeke moet gerig word aan die Superintendent van die betrokke hospitaal(ale) en moet volle besonderhede bevat aangaande onderdom, akademiese- en taalkwalifikasies, ondervinding en huwelikstaat van die applikant en moet voorts 'n aanduiding bevat van die vroegste datum waarop diens aanvaar kan word.

Aansoekvorms en volledige besonderhede oor diensvoorwaardes is verkrygbaar van *enige* Transvaalse Provinsiale Hospitaal of van die Direkteur, Departement Hospitaaldienste, Privaatsak 221, Pretoria.

„Gewaarmerkte afskrifte (*NIE* oorspronklike dokumente) van onlangse getuigskrifte en sertifikate en/of of name van nie meer as drie referente na wie verwys kan word, moet die aansoek vergesel."

Johannesburg (Algemeen) en die Universiteite van die Witwatersrand (Smithstraat, Johannesburg).

Senior Mediese Beampte (Ortopediese Chirurg) £1,980 per jaar (Vasgestel);

Deeltydse Tweede Mediese Assistent £100 per sessie per jaar ten opsigte van 1½ sessies per week.

Pretoria (Algemeen) en die Universiteit van Pretoria (Posbus 437, Pretoria).

Mediese Beampte Graad II £1,740 per jaar indien twee jaar geregistreer ná Internskap of Mediese Beampte Graad III, £1,380 x 60 — 1,560 per jaar indien minder as twee jaar geregistreer.

(Vakature bestaan in die *Ongevalle Departement*);

Kliniese Assistent (Oor, Neus en Keel) £1,020 — 1,140 x 60 — 1,260 per jaar (Moet vir *ten minste* twee jaar gekwalifiseerd wees);

Kliniese Assistent (Patologie) £1,020 — 1,140 x 60 — 1,260 per jaar (Moet vir *ten minste* twee jaar gekwalifiseerd wees).

Barberton (Posbus 56, Barberton).

Deeltydse Algemene Praktisyn £170 per sessie per jaar ten opsigte van 3 sessies per week (3 poste).

Edenvale, Pk. Raedene, Johanneburg.

Mediese Beampte Graad II £1,740 per jaar indien twee jaar geregistreer ná Internskap of Mediese Beampte Graad III, £1,380 x 60 — 1,560 per jaar indien minder as twee jaar geregistreer.

Middelburg.

Mediese Beampte Graad II £1,740 per jaar indien twee jaar geregistreer ná Internskap of Mediese Beampte Graad III, £1,380 x 60 — 1,560 per jaar indien minder as twee jaar geregistreer;

Mediese Beampte Graad I £1,860 per jaar (Vasgestel).

Nylstroom (Posbus 201, Nylstroom).

Mediese Beampte Graad I £1,860 per jaar (Vasgestel).

Potchefstroom.

Deeltydse Tandarts £85 per sessie per jaar, ten opsigte van ½ sessie (2 ure) per week (Sluitingsdatum vir *hierdie pos* is die 31ste Januarie, 1961).

Suid-Rand, Pk. Rosettenville, Johannesburg.

Mediese Beampte Graad II £1,740 per jaar indien twee jaar geregistreer ná Internskap of Mediese Beampte Graad III, £1,380 x 60 — 1,560 per jaar indien minder as twee jaar geregistreer.

Vereeniging (Posbus 56, Vereeniging).

Deeltydse Spesialis Narkotiseur £205 per sessie per jaar ten opsigte van 1½ sessies per week.

Verre Oosrand, Posbus 5, Pk. New State Areas.

Deeltydse Spesialis (Kindergeneeskundige) £205 per sessie per jaar ten opsigte van 2½ sessies per week.

Die sluitingsdatum vir die ontvangs van aansoeke is die 18de Januarie, 1961.

O 6669

43rd MEDICAL CONGRESS (M.A.S.A.), CAPE TOWN, 24 – 30 SEPTEMBER 1961 : 43ste MEDIESE KONGRES (M.V.S.A.), KAAPSTAD, 24 – 30 SEPTEMBER 1961

INTENTION FORM

Please complete and return *without delay* to the Hon. Organizing Secretary, Congress Office, 43rd South African Medical Congress, P.O. Box 643, Cape Town.

[Please cut here]

1. Do you wish to attend the 43rd South African Medical Congress in Cape Town? .....
2. Will you be accompanied by your wife/husband? .....
*3. How will you travel to Congress? Motor/train/aeroplane
4. Will you be attending the Banquet? .....
5. Will you be attending the Ball? .....
6. Which sport, if any, will you be taking part in? .....
7. Are you a member of the Medical Association? .....

NAME: .....
(In block letters)

ADDRESS: .....

* Delete whichever is not applicable.

VOORNEMENSVORM

Voltooi en stuur asseblief, *sonder versuim*, terug aan die Organiserende Ere-Sekretaris, Kongreskantoor, 43ste Suid-Afrikaanse Mediese Kongres, Posbus 643, Kaapstad.

[Sny hier af]

1. Is u van plan om die 43ste Suid-Afrikaanse Mediese Kongres in Kaapstad by te woon? .....
2. Sal u vrou/man u vergesel? .....
*3. Hoe sal u na die Kongres toe kom? Motor/trein/vliegtuig
4. Sal u die Banket bywoon? .....
5. Sal u die Bal bywoon? .....
6. Aan welke sportsoort, indien enige, meen u om deel te neem? .....
7. Is u 'n lid van die Mediese Vereniging? .....

NAAM: .....
(In hoofletters)

ADRES: .....

* Krap uit wat nie toepaslik is nie

THE AUSTIN MOTOR COMPANY LIMITED
P.O. BOX 1, BLACKHEATH, CAPE

APPLICATIONS ARE INVITED FROM REGISTERED MEDICAL PRACTITIONERS RESIDENT IN THE IMMEDIATE AREA FOR THE POST OF PART TIME MEDICAL OFFICER TO THE ABOVEMENTIONED FACTORY AT AN ANNUAL REMUNERATION OF £360. APPLICATIONS TO BE RECEIVED NOT LATER THAN TEN DAYS FROM THE DATE OF PUBLICATION OF THIS ADVERTISEMENT. FURTHER DETAILS MAY BE OBTAINED FROM THE PERSONNEL MANAGER, AUSTIN MOTOR CO., P.O. BOX 1, BLACKHEATH, CAPE.

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ANNOUNCING... a new name

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'VALOID' For drug induced nausea

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